#### PROJECT TECHNICAL REPORT TASK E-94

SIZING DATA FOR MULTIPLE STAGES
EXPENDED AND REUSABLE OPERATING MODES
TABULAR LISTING OF CONFIGURATION AV CAPABILITIES

NAS 9-8166

25 FEBRUARY 1971

Prepared for
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

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NATIONAL TECHNICAL INFORMATION SERVICE Springfield, Va. 22151



APPENDIX A

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Prepared by R. J. Bratkowski

Approved by

D. T. Appleton
Advanced Missions Studies
Spacecraft Systems Analysis

Project



#### APPENDIX A

This appendix contains a tabular listing of the one way  $\Delta V$  increments theoretically obtainable from each of nine different one and two stage propulsive configurations. Payload delivery, retrieval and roundtrip operating modes are considered. An I sp value of 460 seconds was selected to typify engine performance.  $\Delta V$  magnitudes are shown for propellant mass fractions ( $\lambda$ ) from 0.80 to 0.95 and payload to stage weight ratios ( $W_{PL}$   $W_S$ ) from 0 to 10.

Appendix B provides sufficient mathematical development to enable extending the results shown here to other values of  $I_{sp}$ ,  $\lambda$ , and  $W_{PL}$   $W_{S}$ . Some of the numerical data shown here are preceded by the message MISSION IMPOSSIBLE \*\*\*\*  $K_i$ =XXXX. These cases require propellant off-loading to form a physically realizable operating configuration. Since one of the basic constraints inherent in these formulations is that propellant off-loading is not considered, those numerical results preceded by the indicated message should be disregarded.

SINGLE STAGE - EXPENDABLE

ISP= 460.0

LAMBCA	WFL/WS	WS/WPL	DELTAV
.8300000+00	•0000000	.0000001	-2381978+05
.89900000+00	•1000000 <del>-</del> 01	"1 <u>000000</u> 603	.2324495+05
<b>.</b> 801300C+0C	•2500°C0-01	<b>.</b> 4000000602	•2244204+05
•8000000+0C	.5CCOCO9-01	.2007030+02	·2123934÷05
.8000000400	<b>.</b> 8000000-01	•1250000+02	•1997900÷05
•8000000+00	•1000000÷00	.1000000+02	•1922947+05
\$000009÷00	•2000000÷00	•5000000÷01	<b>.</b> 1625953∻05
.80000000÷0C	• <b>40000000+0</b> 0	.2500000+01	•1254006÷05
<b>.8020000</b> 400	•6000000±00	•1666667+01	•1025862 <del>+</del> 05
.80000000+00	-8CC00C0+0O	•1250000+01	.8699279+04
.80000000+00	•1000000÷01	•100 <u>00000</u> +01	•7560251+04
\$000000+0C	.2000000÷01	<u>~5000000+00</u>	•459 <u>0312</u> +04
<b>.</b> 8000000∻00	-3C00000+0I	.3333333+00	.3302538+04
<b>"</b> 80000000¢0C	.4°00,000.∻01	.2500000÷00	.2580441+04
.8000000¢00	•5000000+01	• 20000000+00	.2117901+04
•8000000+0C	.800000+01 .	•125 <b>1</b> 000+10	•1377744+ <u>0</u> 4
•8იიციეი÷იე	•1000000+02	•1000000÷00	•1117516÷C4
•8250C10+00	•0000000	• 0000000	•257 <del>9</del> 605+05
.8250000÷00	.1000000-01	·1000000+03	.2512088+05
.8250CCC+QC	•2530 <u>000</u> -01	•4001000+02	.2418523+C5
•8 250000¢00	.50 <u>00000</u> -01	'•2000000÷02	·2279868+05
.82500 <u>00</u> +00	-800000-01	.1250000+02	.2136319+05
•8250 <u>000</u> +00	.1000000÷00	.1000000+02	.2051724+05
.8250000+00	<b>.</b> 2000000+00	•5000000+01	•1721470∢95
•8250C00∻0G	.4C00000+00	•2500000÷01	.1316995+05
.825000C40C	<b>.</b> 6000000÷00	.1666667+01	•1072850+05
.825000C+0C	<b>.</b> 8990990∻09	•1250000÷01	. •9073984*04
.8250000¢00	•1000000÷01	.1000000+01	•7871843+n4
<b>.</b> 8250000÷00	.2C00000+01	•5000000+00	.4759457+04
.825000C+0C	•300000÷01	.3333333+00	•3418618+94
.825000C+00	•4C00000+01	•2500000÷00	•2668800÷04

## SINGLE STAGE - EXPENDABLE ISP= 460.0

LAMBCÁ	WPL/WS	. WS/WPL	DELTAV
18250000÷00	.50000000401	• 2000000+40	•2189227+04
•8250000+0¢	.8000000÷01	•1250000+00	•1422935+C4
.8250000+00	. 1000000+02	.1000000+00	•1153835÷∩4
<b>.</b> 8500000+00	•0000000	• 0000000	•2897749+95
.8500CCC+nr	•1000000 <del>-</del> 01	•1000000+03	•2726959 ¢C5
•850000C+0C	.2500000-01	•4001000÷02	.2616151+05
.8500000+00	.5C00C00-01	•20000004 <u>0</u> 2	•2454188÷05
<b>.</b> 8500000+00	.8000000-01	•1250^ <mark>00+</mark> 02	•2289032 <del>+</del> 05
•8500CCC+00	•10000c0÷00	.1007070÷02	•2192784+05
<b>.</b> 8500000400	•2000000÷00`	•5000000+01	•1823580+05
.8500CQC+0C	• <b>4</b> ° ¢ 9 0 0 0 0 + 0 0	•2500000+01 ·	•1382783 <b></b> ◆15
•8500000+00	•60000C0∻00	<b>.</b> 1666667+01	•1121380÷05
•8500000+00	•8000000+00	•1250 <u>0</u> 00+01	<b>.</b> 9458423*94
•8500000+00	.1000000+01	•1000000+01	•8190136÷04
.85000000+00	•2000000+01	•5000,000+00	•4930558+04
<b>.</b> 8500000400	•300000÷11	•3333333+00	•3535615÷04
.850CCCC+00	•4CAAGAG+01	•250 <b>/</b> 000+/10	.2757689*94
•8500000¢0C	.5C100C0+01	<u>.</u> 2007070+01	.2260898+04
\$5000000±07	•8CAAQQQ+01 .	.1250000+00	<b>.1</b> 468264∻04
<sub>-</sub> 850000040¢	•1C00000+02	10000000+00	.1190244+04
<b>.</b> 87500∩0∻∩0	•000000	` .0001000	•3077586+05
.87500°C+0°C	1000000-01	•1000000+03	•2978410÷05
. £75000C÷00	.25000C0-01	•4000000+02	.2844295+95
•875000C+0C	.5000000-01	. 2001000+02	.2651815+05
<b>.</b> 8750000+00	<b>-</b> 8000000-01	•1250000÷02	•2459336÷05
.875000C+00	.1rnn0CC+00	.1000000+02	•2348718+05
<b>.</b> 8750000+00	•20000¢ე∻ço	•5000000÷01	·1933261÷95
<u>•8750000+00</u>	•4CC00C0+0O	·2500000+01	.1451633405
.8750CCC+0C	<b>.6000009</b> +00	•1666667÷01	<ul><li>1171554+05</li></ul>
.875000C+0C	*8¢000¢0÷0ὖ	.1250000+01	<b>.</b> 9853115+04
•8750 <sub>0</sub> 000±00	•1000000÷01	.1007090+01	.8515425+04

## SINGLE STAGE - EXPENDABLE ISP= 460.0 .

LAMBDA	WPL/WS	hS/WPL	DELTAV
.8750 <u>0</u> 000+00	.2000000+01	•5001010÷00	.5103661+04
<b>.</b> 875^^CC+0C	<b>.</b> 300000+01	.3333333+00	.3653544+04
.8750C0C+OC	•4CC0000÷01	•250000C+00	·2847116 *04
.875000C+0C	•5000000÷01	• 2000000+00	.2332918+04
.8750000+0C	-8000000+01	<b>₊1</b> 250000+00	•1513733+04
<b>.</b> 875000C+00	•1C900000÷02	•1000000+00 ·	.1226742+04
•9000000+00	•0000000	• 0000000	•3407840+95
•9010000+00	•10000CQ-01	, <b>.</b> 1000000+03	.3281507÷05
9000000400	.2507900-01	•49000000+02	.3114132+05
•800000000+00	· .5000000-01	•2000000n+12	•2879959+05
•9000000+00	•8¢90990-01	•1250000+02	·2651815+75
•90000000+00	•1C000C0÷00	•1000000+02	.2523038+95
• 30000000000	•20000C+00	•5°00°100+01	.2051724+05
•90300000+90	<b>.</b> 4¢100¢0+00	•2500000+01	•1523843+05
*3JUÜGÜG*ÜC	•600000+00	•1666667+C1	•1223489÷95
*300000C+0C	•8000000+00	•1257n00+01	·1025862+05
* ລັບບໍ່ບັບບໍດິຈຸບໍ່ປ້	•1000000+01	•1002020+01	•8848C25÷C4
• 6 0 0 0 0 0 0 0 0 0	•2000000÷01	•5000000+00	.5278811+04
•9000000+0C	.30000C0+C1	•3333333+00	<b>.</b> 3772421+04
• ᲛᲘᲐᲘᲘᲘᲔᲑᲘᲬ	. <b>4</b> 000000+01	•250 <u>0000</u> +00	•2937086+04
.9000000400	•5CQ3QQC+Q1	• <b>2</b> 00000000	<b>.</b> 2405290∻04
•9000000+00	<b>.</b> 8000000+01	•1250000±00	•1559342+04
<b>,</b> 90000040 <b>0</b>	•1r00000+02 i	•1000000÷00	.1263331+04
- <b>.</b> 9250000 <del>+</del> 00	•0000000	•0000000	.3833611+05
•9250000+00	·1000000-01	•1000000+ <u>93</u>	•3663096÷05
<b>,9250000+00</b>	•2500000-01	•400000 <b>0</b> 402	.3444386÷95
•9250C0C+0C	.500000-01	<b>.20</b> 0799€+02	•3149796÷05
.925000C+0C	<b>.</b> 8000000-01	•1250000÷02	.2873123+05
•9250000+0C	.1C00220+00	•100000n+02 .	.2720665+05
<b>.</b> 92500000+00	•2000000÷00	.5000000401	·2180502+05
•925000C+0C	<b>.</b> 4000000+00	·2500000+01	•1599758*05

SINGLE STAGE - EXPENDABLE

ISP= 460.0

LAMBCA	WPL/WS	· WS/WPL	CELTAV
.925000C+0C	.66000000+00	.1666667+01	•1277314÷05
.9250000+00	<b>.</b> 8€000000∻00	.1250000+01	.1067555+75
•9250 <u>000+00</u>	•10000ce+01	.10000000+01	.9188271÷04
.9250000+0C	.2000000+01	.5/00//00+00	•5456N59÷N4
•925000C+0n	•3000000¢01	.3333333+00	•3892260+04
.9250000+0C	.400000c+01	.2500000÷00	•30276∩6÷04
•9250C0C+0C	<b>.</b> 5000000+01	.2000000+00	•2478018+04
•925000C+0C	•8000000+01	.1250000+00	•1605092+34
•92500000+nc	•1000000+92	.1000000÷00	.1300010+04
.9500000¢00	•0000000.	.0000000	•4433792 <del>+</del> 95
<b>,</b> 9590 <u>0</u> 00,+00	.10000000-01	.1000000+03	•4178592÷ <sup>1</sup> 5
•9500000+00	.2500000-01	.4000000402	•3870157 <b>÷</b> 05
.9500000÷0C	.5000000-01	.20000000002	.3480050+05
•9500000+00	-8000000-01	.1250000+02	.3133442+05
<b>3</b> 95000000±00	.1000000+00	•1000000+02	<b>.</b> 2948809+05
•95000004ng	.2000000+00	.5000100+01	.2321561+05
.9510000£3C	.4000000+00	.25000000+01	•:1679777 <b>+</b> 05
•9500000¢00	•6G0000C0+00	.1666667+01	•1333170÷05
.9510000÷0C	•8000000÷00	.125/00/00+01	·1110457÷05
~95 <u>~</u> ^CCCC+0c	.1000000+01	. <u>1</u> 0000000401	29536524+Q4
•9500000+00	.2000000+01	<u>.5707000+30</u>	.5635456+04
•9500000+00	.3000000+01	.3333333+00	•4013C78+04
•9500000+00	•4000000 <del>+</del> 01	•2500000÷00	<b>.</b> 3118684⊀04
<b>₽</b> 95000000+0€	.5000000+01	·2000000+00	.2551105*04
.950000C+0C	<b>.</b> 8000000+01	.1250000+00	·1650983+04
<b>.</b> 9500000+0C	.1000000+02	.1000000+00	•1336780+04

### SINGLE STAGE - REUSABLE\*\*\*\*PAYLOAD DELIVERY

LAMBÇA	WPL/WS	WS/WPL	DELTAV
.8000000+00	.0000000	• 0000000	.1190989+05
.80000000+00	.1000000-01	•.10naaan+03	.1181888*05
.8¢000000+0¢	.2500000-01	.4000000÷02	•1168407÷05
.80000000+00	.5000000-01	.2000000 <del>+</del> 02	•1146393+05
•80000000+0C	.8CQ0QQQ-01	.1250000+02	•1120719÷75
•8小JJQQQ+JC	.1000000+00	.1000000÷02	.1104047+05
.80000000+00	.2000000÷00	•5000000+01	•1025862+95
.80000000+00	<b>.</b> 4000000+00	.2500000+01	.8931188+04
<b>.</b> 80000000÷0C	•600000÷00	•1666667÷71	• <b>7</b> 866925+94
<b>.</b> 80000000+00	.8000000+00	.1250000+01	.7007344+04
<b>.</b> 8900000+00	.1900CCO+01	.10000000+01	•6304905÷04
•8000000c+DC	.2000000 <del>+</del> 01	•5000000+00	•4159954+04
.800 <u>0</u> 000+00	.3000000+61	.3333333+00	<ul><li>3089365+94</li></ul>
<b>,</b> 8000000040C	.4000000+01	.2500030÷00	•2453886÷04
.8小小OCOC+OC	.5000000÷01	•20 <u>0</u> 0000÷00.	• <b>2</b> 034265*04
°8შებნსმ÷შС	.8600000+01	.1250000+00	.1343482÷04
•8小りへりつり+うし	•1¢00000+02	.1000000+00	•1095243+04
.8250CQC+0C	•000000	• ११०० १००	•1289803+05
•82500000+0C	.1000000-01	.1000000+93	<ul><li>1279565+05</li></ul>
.8250CCC+00	.2500000-01	<b>~</b> 4000000∻02	.1264401+05
。825 <u>000</u> 00400	<b>.</b> 500000-01	•200 1010÷02	.1239641405
.8250C0G+0C	.800000-01	<b>.</b> 1250000÷02	.1210772405
.825000C+OC	` <b>.</b> 1000700+00	.1000000+02	•1192033÷05
.825000C÷00	.2000000+00	.5000000÷01	.1104267+05
.8250000+00	<b>.</b> 4000000+00	.250000÷01	<b>.</b> 9559€20÷04
.825^000 <b>0</b> +00	.600000+00	.1666667÷01	•8379948÷94
.8250C0C+00	8000000+00	.1250000+01	•7434677 <b></b> ≠04
.825900C+0C	.1000000+01	.1000000÷01	.6667685+04
<b>.</b> 8 25∩000÷00	.2000000+01	•5000000÷70	·4357313+04
•825000C÷0C	.3000000001	•33 <mark>33333</mark> ÷00	.3221561+04
•8250000÷0C	.4000000+01	• 25¦00 000 ÷00	2552487+04
		1	

### SINGLE STAGE - REUSABLE\*\*\*\*\*PAYLOAD DELIVERY

LAMBCA	WPL/hS	WS/WPL	DELTAV
.8250000÷00	.5000000+01	.2000000÷00	.2112633+04
•8 250000±00	.8000000÷01	·1257000+00	.1391730+14
•8250000¢0C	•1C00009+02	•1002000÷00	·1133587+04
- <b>.</b> 8500000400	•000000	•0000000	•1403875÷05
.850000C+00	•1000000-01	•1000000÷03	.1392227+05
<b>*8500C00+0C</b>	•25000CC-C1	•4000000+02	•1374975+05
<b>.</b> 85000000+00	•5000000-01	•2000000÷02	•1346810+05
<b>.</b> 8500000+00	<b>.</b> 8000000-01	•1250n00+02	•1313983÷95
•85000000+00	.1C000C0+00	.1000000+02	•1292685÷05
•8500C00+00	•2000000+0n	•50000000÷01	•1193104+05
.8500000+00	<b>.</b> 4000000+00	÷2500000+01	•1025862÷05
<b>.</b> 8500000400	. •6000000+00	.1666667+01	.8941556÷04
•8500000+0C	•8¢00¢00÷00	•1250nn0+01	•7896441÷04
•8500000+00 T	.1∩00000÷01	•10/0/20+01	.7055638÷04
<b>.</b> 85000000±00	.2000000+01	•5001000+00	·4562357÷04
•850000C∻0C	•3C000C0+C1	•333333÷00	•3357241+94
<b>.</b> 8500000400	•4C00C00+01	•2500000+00	.2653035+04
•8590000+0C	•5000000÷01	•2000000+00	·2192235+04
.850000C+0C	.8C00000÷01	•125707C÷00	•144Q446÷Q4
•85000000÷00	.1000000+02	•1000000+00	.1172227+04
•8750000÷00	•000000	•00000c	•1538793+05
• 875999C+9C	•1000900-01	.1000000+03	•1525331÷05
<b>.</b> 87500∩ე∔ሳር	.2500000-01	•4000000÷02	•1505392+05
.8750C0C+OC	•5000000 <del>-</del> 01	·• 2000000+02	•1472849÷05
.875000C+0C	.8000000-01	•125000n÷∩2	·1434939+N5
•8750Q0Q+QQ	-1000000+00	•1000000÷02	•1410359+05
•8750C00400	•26000CC+ON	•5007930÷01	.1295699+05
•8750000÷Q0	•40000CC+00	.2500000+01	.1104715+05
•8750000÷00,	•6000000+00	•1666667401	.9562686+04
•875COCC+OC	•8C00000+00	•1250000+01	•8399183+04
•875000C÷0C	·1000000+01	.1000000+01	.7472859+04

# SINGLE STAGE - REUSABLE\*\*\*\*\*PAYINAN DELIVERY ISP= 460.0

•			
LAMBÇA	WPL/WS	WS/WPL	DELTAV
.8750000+00	.2CC0000+01	•5000000+00	.4775771+94
.8750000+00	.300000+01	.3333333+00	.3496611+04
<b>.</b> 8750€0€+0€	.4000000+01	.2500000÷00	.2755616÷04
• 875 CCC C+00	•50000000÷01	•20 <u>0</u> 00000000	.2273113÷74
.8750000+00	.8000000+01	•125nnnn+nn	.1489642+04
•8759090±00	•100000÷n2	•1000000÷10	•1211169÷94
•923000CC±0C	<b>40000000</b>	• 600,000	.1703929+05
• 9000000+00	.1000000-01	•1000000÷03	•1688000+05
• 9000000+00	<b>.</b> 25000C0-01	•4000000 <del></del> 402	.1664423+75
.91000000+00	•500000-01	•2 <b>000000</b> 0402	•1625953+05
• 90000000	.8000000-01	·125000C+02	•1581173+05
•9000000+00	.1r00000+00	·•10000000002	•1552167+05
- • <del>9</del> 0000000+00	<b>.</b> 2000000+00	.5000000*01	.1417320+05
.9rqgnng+nn	.40000CC+00	•2500100+01	.1195333+05
• ᲛᲔᲔᲔᲔᲔᲘ 0+00	•6000000+00	•1666667÷01	.1025862+05
. 9000000g+0¢	<b>.</b> 8¢₫ᲔᲔᲔᲔ÷00	•12500 <u>0</u> 0+01	.8951611+∩4
* 300000000+00	10+000001	•1009700÷91	• <b>7924</b> 582 <b>+</b> 04
*3000000+0C	.200000+01	<b>.</b> 5000000∻00	•4998343+04
.90 <u>00000</u> 0400	.3000000÷01 ·	•3333333+00	.3639901+04
• ᲛᲘᲘᲘᲘᲘᲘ+ᲘԸ	.4000000+01	`.2500000+00	•286 <u>0</u> 324÷04
•9000000 <del>0</del>	<b>.</b> 5¢09¢00∻∩1	•500JJ00+00	°5355314∻04
.900000c+0 <b>c</b>	•8000000+01°	•1250000+00	•1539328÷04
•მიაციეც+იც	.1000000+02	•1007270+00	•1250418+04
•9250000+00	<u>. ೧</u> . ೧೦೧೦೧೦	•0000000	•19168C6+05
•9250C0C÷0C	.1000000-01	•1 <u>0</u> 00000+03	<b>.</b> 1897284+05
•9250000÷00	.2500000-01	•4000700+02	.1868377+05
.9250000¢00	.5000000-01	•200 <sup>9</sup> 190+02	.1821235+05
• 9250000c+0C	.8000000-01	•1250000÷02	<ul><li>1766428+05</li></ul>
•9250000400	.1000000+00	•1007030+02	•173¢983+05
•9250000±0C	<b>.</b> 2000030∻00	*500000010 -	.1567096+05
•9250000+00	.4CC0000+00	.2500000÷01	•1302170±05

### SINGLE STAGE - REUSABLE\*\*\*\*PAYLOAD DELIVERY

LAMB <u>D</u> A'	. WPL/WS	WS/WPL	DELTAV
, 925000C+0C	•6000000±00	•1666667÷01	.1105174+05
•9250000400	•80000000	.1257070+01	<b>.</b> 9565698+94
•9250000+00	•10000n0÷01	.10000000401	.8417667404
•9250000+0C	•2000000+01	.5000000÷00	•5230984÷04
•9250900+00	•3000000+01	•3333333÷00	.3787362+04
•925011C+0C	.400000+01	£2500°00°0+00	.2967258+94
•925000C+0C	•5CC0CCO+01	<b>₊</b> 2000000+00	•2438887±04
•925000040C	<b>.</b> 8000000+01	•125000C+00°	.1589515+04
•925000C+0C	•1000000÷02	•1000000÷00	.1289980+04
•9500000÷00	•0000000 ;	•0000000	.2216851+05
•9500000+00	•1C90900-91	.1000990+03	.2191288+C5
•95000n0+00	<pre>-2500000-01</pre>	.4nnn000+02 `	•2153446÷C5
•95000000+00	•50000n0-n1	.20000000÷02	.2091793+05
•9500000 <del>+</del> 90	<b>.</b> 8000000-01	.1257000+02	.2020287+05
•95000000+00	.1GCOQGQ+0O	•1009000+02	.1974186+25
•950000 <b>00</b> +0 <b>0</b>	.2000000+00	.5007030+01	.1763197+05
•95000CC+AC	.4000000÷00	.2500000+01	.1432970+05
•9500000400	•6000000+00	.1666667401	•1197688÷75
•9500000+00	.8000000+00	.1250000+01	<b>-1025862</b> +05
•9500000+0C	.10000000001	.1000000+01	.8961369∻04
*8200000*00	.2000000÷01	.5000000.+00	.5474755±04
•950000+00	.3000000+01	.3333333÷00	.3939273+04
•9500000000	4CC00C0+01	•25000n0 <b>∻</b> 00	.3076526+04
•9500C0C+0C	.5000000+01	.2000000÷00	.2523884+04
.9500000¢00	-8099999+01	.1250000÷00	.1640214+04
.9500000+00	.1000000+02	·1000000+00	.1329860+04
	•		

## SINGLE STAGE - REUSABLE\*\*\*\*\*PAYLOAD RETRIEVAL ISP= 460.0

LAMBDA	WPL/WS	WS/WPL	DELTAV
00±0000008.	•0000000	.cooriono	.1190989+35
.8/00000+00	.1000000-01	.1000100+13	.1171032+05
1800000C+0C	.2500000-01	.4000000÷02	.1142826+05
.8rg000cc+g0	.5000000-01	•2000000+92	·1099832÷05
•8ᲔᲘᲔᲔᲘᲔ�ᲔᲔ	.8000000-01	•1250000÷02	.1053770÷05
<b>.</b> 8∩ԳՕՈՕՓԻՈՑ•	.1000000400	.1000000+02	•1025862÷05
•80100001÷00	•20000C+00	.5000000+01	.9111033+04
.87000000*00	.4000000+00	·2500000÷01	•7560251÷04
*80000000÷00	•6000000+00	.1666667+91	•6526703+94
<b>.</b> 80000000400	•8CC00000÷00	.1250090+01	•5772547+04
.804000040C	•1¢00000401	•10000000+01	•5191129÷04
*800JC0C+0C	<b>.</b> 2000000+01	•500 <u>0</u> 000+00	•3510183÷04
•8393000+00	.3000000+01	.3333333+00	.2677248+04
•80000000+00	<b>.</b> 4℃∩∩곗ፀ0∻01	.2500000÷00	•2170977+04
•80000000+00	•5C00C00+01	•20203G0÷00	•1828424 <b></b>
.83030000+00	<b>.</b> 8000000+01	•1250 <u>110</u> +00	.1244521+04
აგეიეიიე∻იი	•1C00000+02	•1000700÷00	•1027C39+04
•8250 <u>000</u> 0+00	•000000	•000000	•1289803+05
.8250000÷00	.100000C+01	•100000+03	•1265885 <del></del> +05
•825000040C	•2500000-01	•4000000+02	.1232351+05
.8250C^C+00	.500000-01	•2001000+02	•1181796÷25
•8250000+0C	.8C00C0C-01	.1250000÷02	•1128320±05
.8250000+0C	.1000000+00	•1000000+02	.1096232*05
•8250coc+oc	.2000000÷00	•5007000÷01	•9664392+04
<b>.</b> 8250000400	•4000C0C+0C	.2500000+01	.7954719+04
.8250000+0C	.6000000+00	.1666667+01	•6836891*04
.8250000+0C	•800000000	•1250000÷01	•6029861 <del>+</del> 04
<b>.</b> 825900€90	-1r000000+01	•1000000+01	•5411897+04
<b>.</b> 82500000+00	.2C00000+01	•5000100÷00	.3642126+04
•825000¢+0¢	.3000000+01	.3333333+00	•2772623÷04
•8250CCC+00	.4000000+01	• 2500000+00	•2246036+C4

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LAMBCA	WPL/WS	WS/WPL	DELTAV
.8250000400	•5CCCCCOO+01	.2000000+00	•189°450÷04
.8250000+00	.8(00000+01	.1250000+00	.1285493+04
.8250000+0C	•10000c0÷02	•1000000÷00	.1060506+04
.85000000400	.0000000	• 0000000	.1403875+95
<b>.</b> 8500000400	.1000000-01	.10/100/10+03	.1374616+75
<b>.</b> 85000000+00	.25000C0-01	.40 <sup>40</sup> 0000+02	•1334020+C5
<b>.</b> 8500000+00	.5CC0000-01	.200 <u>0000</u> 00+02	.1273681+05
.8500C0C+0C	10-0100338 <b>.</b>	.1250000+02	·1210863+95
.8500000400	•1000000÷00	.10000000+02	•1173617+05
<b>.</b> 8500000+00	•200000 <del>0</del>	•5000000÷01	.1025862+05
.850000C+00	•4000000+00	.2500000+01	·8368431÷04
<b>.</b> 8500000+00	•6000000+00	.1666667+01	•7158382+04
.850000C+0C	•8000000+00	.1250000+01	<b>.</b> 6294655+04
.850000C+0C	.1000000401	.1000000+01	•5637999÷04
•8500000¢00	.2000000+01	•5000000+00	•3775784+04
.850000C+00	.3000.000±01	.3333333+00	•2868839+D4
.85000000+00	.4000000+01	.2500000+00	.2321594+04
<u>.8500000</u> +00	<b>.</b> 5000000+01	<u>.2000000+00</u>	•19528C5÷04
.8500000ch00	•8000000+01	•1250000÷00	<b>.</b> 1326602 <b>+</b> 04
<b>.</b> 85000000+00	.1000000+02	•1007030∻∩ <b></b>	.1094060+04
•875000C+00	• 6000000	•0000000	•1538793+C5
.8750CCC+0C	.1000CCC-01	.1007000+03	.1501982+05
.875000€400	•25000C0-01	.4009330+02	•1451634÷05
.875CCQQ+QC	•5C00000-01	.2000000+02	•1378197÷05
.8750CQ0+0C	.8000000-01	.1250000+02	.1303299+15
.8750CQC+QC	.1000000+00	*1000000+05	.1259548+05
<b>∙</b> 8750000+00	•200n000+00	•5000000+01	•1090009÷05
•875000G+00	.4C000C0+0O	.2500000+01	.8803294+04
•8750C00+∩∩	<b>.</b> 6000000∻00	.1666667+01	.7491996+04
•8750CQ∩+QQ	*8CUJJJO+00	.1250000+01	.6567354+94
•8750C0C+00 ·	.10000000+01	.1000000+01	•5869684 <del>*</del> 74

### SINGLE STAGE - REUSABLE\*\*\*\*\*PAYLOAD RETRIEVAL

			•
LAMECA	WPL/WS	WS/WPL	DELTAV
.8750000+00	.2000000+01	•5000C00+00	.3911199+04
.875 <u>0000</u> 00400	.3000000401	.3333333+00	2965909+04
.8750000400	.4000000+01	•2500000÷00	.2397656+C4
.8750CCC+0C	•5cc00000+01	•2001100÷11	.2015492+74
.875000C+0C	•8000000÷01	•1250000+00	•1367846÷04
•8750000+0C	·1000000+02	•1007700÷7Q	·1127702+04
.90000000+00	.000000	• ¢00^^00	<b>.</b> 1703920÷05
.9000000000	•1000000-01	•1000000÷03	.1655701+05
• ᲒᲔᲔᲔᲔᲔᲡᲘ+ᲔԸ	•2500000-01	•4009000+12	•15911 <u>49</u> ÷05
* 3000CCC+UC	•500000-01	•2000000412	•1499343÷05
.9000000+00	•80000cn-01	•1259990+92	•1408287+05
.9700000400	•1000cco+oo	•1000000¢02	•1356116÷05
•3v000000÷00	•2C00C00+00	•5000000÷01	•1159675+C5
.900 <u>0000</u> 00	•4C009C0÷00	•2500000÷01	•9261505÷N4
• ᲛᲔᲔᲔᲔᲔᲘᲔ+ᲘᲔ	<b>.</b> 6000000∻00	.1666667+01	•7838641+04
.90000000+0C	<b>.</b> 8000000000	•125000C+01	•6848423+N4
<b>.</b> 9000000+00	•1000000÷01	•1000000÷01	•6107221+04
*30400000+0D	.2C00000+01.	.5000000∻00	•4048414+94
• 90000000400	.3000000+01	•3333333400	•3063849÷94
•9900000÷00	.40000CC+01	<u>.</u> 2500000+00	·2474229+04
• ᲛᲐへᲘᲘᲘᲔ⊹ᲘᲘ	•5000000¢01	•2000000÷00°	.2078515+04
.9000000+0C	.8C00000÷01	•1257nQn+Q1	.1409227 +04
<b>•</b> 90000000000	:.1c00009+02	•1000000÷00	•1161433÷94
•92500∩0∻∩C	.0000000	•0000000	.1916806+05
•9250000+00	·1000000-01	.1000000+03	•1849565 ÷ C5
•9250000±0C	·2500000-01	•4000000÷02	.1762407+05
.92500∩0∻∩ç	•5CC0000-01	-200000+02	.1643359+05
«9250000c+0c	.8000000-01	.1250000+02	.1529721+05
•92500CC+0C	.1002000+00	.1000000+02	.1466279+05
•9250000+0C	.2000000+00	.5000000+01	.1235875*05
.925000C+0C	•4000000+00	•25 <sub>0</sub> 00000+01	.9745618+04
1		•	

## SINGLE STAGE - REUSABLE\*\*\*\*\*PAYLOAD RETRIEVAL ISP= 460.0

LAMBCA	WPL/WS	WS/WPL	DELTAV
.925000°C+00	.600000000	.1666667*01	.8199333+04
•925000C+AC	•8¢¢00000÷00	.1250000+01	<b>.</b> 7138365∢04
.9250CCC+QC	•1000000+n1	.10000000+01	•635r897+04
•92500000+00	.2000000+01	•50 <u>0000+00</u>	•4187475 <del>+</del> 04
.925000C+0C	.3000000+01	.3333333+00	.3162672+C4
.925000C+0C	.409099G+91	.2500000+00	.2551329÷04
.9250000+00	•5000000+01	.2000000+00	.2141879+94
.92500CC+0C	.8000000+01	<b>.</b> 1250000+00	•145C745+04
•9250 <u>00</u> 00+00	.1000000+02	•1000000+00	.1195253+04
.95000000+0C	• 0000000	•0000000	•2216851+C5
.9500000+00	.1000000-01	<b>`.1</b> 000000+03	.2112141*05
<b>.</b> 9500000+00	.2500000-01	4000000+02	.1984335+05
.9500000+0C	.5000000-01	.2000000+02	.1820804÷95
.9500000000	.8000000-01	.1250000+02	.1673627+05
.9500cnc+00	·1000000+00	•1000000+02	.1594416+05
.9500010+0C	.2000000+00	.5000000+01	•1319925÷?5
<b>.</b> 95000000000	.4000000400	.2500000+01	<b>.</b> 1025862*95
•9500000+Q0	.6000000+00	.1666667401	.8575206+04
.9500C00*0C	•8000000÷00	.1250000+01	•7437732 <del>+</del> 04
•9500000 <del>+</del> 00	.1000000+01	.1000000+01	.6601021+04
•950000C+0C	• 2000000+01	•5010000¢00	•4328437+04
•950000040 <b>0</b>	.3000000c+01	.3333333+00	•3262394÷04
.9500CrC+00	.40000CC+01	·2500000+0n	.2628934+04
.9500Q0Q+QC	.5000000+01	•2000000¢00	.2205585+04
.9500000+00	.8CC0000+01	•12500G0÷00	.1492401+04
.9500CCC+0C	.10000000÷02	•1000000÷0ņ	.1229163+04

## SINGLE STAGE - REUSABLE\*\*\*\*\*RGUNDTRIP ISP= 460.0

LAMBCA	-WPL/WS	WS/WPL	DELTAV
-80000001+00	.0000000	.0000000	.1190989+05
.80000000+00	.1000000-01	.1000000+03	.1162247+05
.80000000+00	-25000C0-01	.4000000+02	.1122102405
.8000C0C+0C	.5C00CC0-01	.200000C+02	.1061967 + 05
.8000000+00	.8000000-01	•1250000÷02	<b>.</b> 9989500+04
.8000000+0C	.1000000÷00	•1007000÷02	•9614735+94
•80000000+00	<pre>-2000000+00</pre>	.5000000+01	.8129765+94
<b>ა</b> 8იიეე∩ი+ეე	~40000co+oo	.2500000÷01	.6270031+04
•8000000:+00	.60000C0÷∩Q	•1666667÷01	•5129311÷ <sup>0</sup> 4
- 80000C0C+0C	.8000000+00	•1250000+01	• <del>4</del> 349640*04
•800000C+0C	.1000000+01	•100003C+01	•3780125+04
<b>.</b> 800000+00	-200000+01	<b>∙.</b> 50000000+00	<b>.</b> 2295156+04
<b>.</b> 8007000+00	.3000000+01	.3333333+00	.1651269+04
.80000000+00	•4000000+01	.2500000+00	.1290220±04
.80000000+00	•5000000+01	• 20000000+00	•1058951+94
•8000¢00 <del>+</del> 0¢	•800000+01	•1259990+09	.6888719+03
.80000000000	.1000000+02	.1002000+00	•5587581÷03
•8 250000 <del>+</del> 00	• 0¢00000	•0000000	•1289803÷05
<b>.</b> 8250000∻0€	.1CCOCCO-01	•1000700÷03	<b>.</b> 1256044∻05
•8250nn@+n@	.25000C0-01	<b>。</b> 4ᲘᲘᲔᲘᲔ0+02	•1209262÷05
.825000C+0C	.5000000-01	<b>.</b> 2909090+02	•1139934÷05
.8250C0C+0C	.8000CCO-01	•1250000÷02	•1068160+05
•8250000÷00	.1C000C0+00	.100700C+02	·1025862÷05
.825000C+00	•2¢¢00¢0+00	•5000000÷01	<b>.</b> 8607352∻04
•8250000 <del>+</del> 00	.4000000+00	.2500000+01	.6584973+04
•82500000≉00	.6000000+00	.1666667+01	.5364252+04
•8250CCC+0C	•80000C0÷00	.1250000+01	•4536992+04
.825000C+OC	.1000000+01	.10000000+01	•3935921÷04
.8250000+00	.2000000+01	•5000000+00	.2379729+04
.82500r0+0C	.3000000+01	• 3333333 * 00	•1709309+04
•8250000∻0¢	.4CC0000+01	.2500000+00	.1334400+04

### SINGLE STAGE - REUSABLE\*\*\*\*RCUNDTRIP

ISP= 460.0

LAMBCA	WPL/WS	hS/WPL	DELTAV
.8250000+00	•5000000÷01	.2000000+00	•1094613+04
8250C0C+0C	<b>.</b> 8000000401	.1250000+00	.7114673+03
.8 2500000+0 C	.1 <b>000000</b> +02	.1000000+00	•5769177+93
-8500000+0C	.000000	• 0000000	.1403875+05
<b>.</b> 85000000+00	.1000000-01	·1007000÷03	.1363479+05
•850000¢00	-2500000-01	•4000000+02	.1308075+05
•8500000+00	•5C00CCO-01	2000000402	.1227094+75
.8500000 <del>+</del> 00	.8000000-01	.1250000+02	.1144516+05
•8500000+00	•1000000÷00	•1000000+02	.1096392+05
•8500 <b>0</b> 00+00	•2CCOCCO+00	•5000000÷01	•9117972+04
•8500000+n0	•40C00G0÷00	•2500000+01	•6913917+C4
•8500CCC+QC	•6000000+00	.1666667+01	<b>.</b> 5606898+04
•850000C+0C	•8CC00C0+OO	·1250C00+01	.4729212÷04
•8500C0C+0C	.1000000∻∩1	•1000 <u>0</u> 00+01	•4095068+04
•8500000+00	.2000000+01	<b>.</b> 5000000+00	·2465279÷04
•8500000+0C	.3C000C0+01	.3333333+00	·17678C7+04
<b>.</b> 8500000400	.4CCOGCC+C1	•2590000+00	•1378844÷04
•85000000+00	•5000C00÷01	<u>.</u> 2000000÷00	•1130449÷04
<b>.</b> 85000000+00	•8000000÷01	•1250000+00	.7341321∻03
<b>.</b> 8500000+00	.10000000+02	.1000000÷00	•5951218÷03
•8750000+00	.000000	•0000000	•1538793+95
<b>.</b> 875000C+0C	·1000000-01	.1000000+03	•1489205<05
.875 <u>00</u> 00+00	.2500000-01	•4909000+02	.1422147+05
.8750000400	<b>.</b> 5000000-01	2000000+02	•1325908÷05
.8750000÷00	•8C00000 <del>-</del> 01	·1250000+02	<b>.</b> 1229668+05
•8750000+00	•1000000÷00	•100100C÷02	.1174359+05
.875000C+0C	•2000000÷00	•5000000÷01	<b>.</b> 9666393494
•8750000 <del>+</del> 00	<b>~4CCOCCÓ</b> ∻OO	。250 <u>0</u> 000÷01	•7258167÷04
.8750000÷90	<b>~6€000€00</b>	.1666667+01	•5857770÷?4
.8750000+00	.8000000+00	.1250000÷01	• <del>4</del> 926558+74
•8750000+0C	.1000000+01	.10000000+01	°4257713∻04

## SINGLE STAGE - RELSABLE\*\*\*\*ROUNDTRIP ISP= 460.0

LAMBCÀ	WPL/WS	MS\MbF	DELTAV
.8750000+00	.2000000+01	•5000000÷00	.2551830+04
.8750000+00	.3CCOCCO+C1	.3333333+00	.1826772∻04
.8750000+00	.4C009C0+01	·2500000+00°	•1423558+04
.875000C+0C	.50C0C00+01	•2000000+n0 .	•1166459÷04
.87500CC+00	.8000000+01	·125000C+00	• <b>75</b> 68664 <b>♦</b> 93
.87500n0÷0C	.1000000+92	<b>₀1</b> 900900∻00	.6133711+03
.90000000+0C	•0000000	.000000	.1703920+05
•90000000÷00	.1000000-01	.1000000+03	•1640754+05
•9000001+00	.25000CO-01	.4000000+92	.1557066+05
•9000000+00	.5000000-01	•2000000÷02	•1439980+05
•90000000+00	.8000000-01	.1250000+02	.13259C8÷05
•9000000+0C	<pre>.1000000+00</pre>	•1909309÷02	•1261519÷05
.90000000+00	.2CC0GCG+00	<b>.</b> 5000000÷01	.1025862+05
<b>.</b> 90030001+00	<b>.</b> 4000000÷00	.2500000+01	•7619216÷04
.9000000+00	.6000000+00	·1666667+01	.6117447+74
•9090000+0C	.8C000C0÷00	•1250000÷01	•5129311÷04
.90000000	.1000000+01	.1000000401	•4424012÷04
•90000000+00	"2000000÷01	<b>.</b> 5000000÷00	•26394N6+C4
•9000000+00	*3¢00000÷01	.3333333+00	.1886210+04
* <del>3</del> 000000400	.4CCOCEO+01	•2500000 <b>÷</b> 00	•1468543+C4
•9100000+00	.5000CCC+01	.2000000÷00	•1202645÷04
•90000000+00	.8000000÷01	·1250000+00	<b>.</b> 7796708+03
.50000000+00	•1¢00000÷02	<b>.</b> 1000000+00	•6316655÷03
.925000C÷0C	.000000	•0001000	•1916806÷05
•9250000÷00	.1000000-01	.1000000+03	•1831548÷05
•92500000+00	.25C0CCC-01	<b>.</b> 4000000+02	•1722193÷05
.9250000e+00	.5000000-01	•2000000÷02	.1574898+05
.9250000 <del>+</del> 00	.800000-01	.1250000+02	.1436562+05
.925000C+0C	.10000cn+nn	.1000000+02	.1360333+05
•9250000+00	.2000000+00	.5000000000	•1090251+05
•9250000¢0C	.4000000+ <del>0</del> 0	.2500000+01	<b>.</b> 7998788∻04·

## SINGLE STAGE - REUSABLE\*\*\*\*ROUNDTRIP ISP= 460.0

LAMBCA	WPL/WS	WS/WPL	DELTAV
•925000C+0C	.6000000+00	.1666667+01	•6386569+04
• 9250000÷00	.8000000+00	.1259900+01	•5337776÷74
•925000C+0C	.1000000+01	.1000000+01	•4594135÷04
•9250C0C+0C	.200000+01	•5000000÷00	•2728030÷04
•9250000+00	•3C000CO+01	.3333333+00	• <b>1</b> 946130+04
.92500nn+no	.400000+91	.2500000+00	•1513803+C4
• 9250 <u>0</u> 00±00	•5000000÷01	•200 <u>0</u> 000+00	•1239009÷04
•9250000+0C	<b>.</b> 8000000+01	•1250000÷00	•8025458+03
•925000C÷0C	•1c00000+02	.1000000+00	•6500050+03
•9500000+00	.000000	•0007700	•2216851 <b>÷</b> ∩5
.9500010+00	<pre>-1000000-01</pre>	•1000000÷03	<b>.</b> 2089296+05
•9500000+00	<pre>•2500000-01</pre>	•4000000+02	.1935079+05
• 9500000e00	.5¢¢0¢00-01	<b>-</b> 2000000+02	•1740025÷05
.950000¢¢00	.800000-01	.1250000+02	•1566721+05
<b>.</b> 95000000000	•1c00000+00	.1000000+02	·1474405+05
<b>.</b> 95000000+00	.2C00000+00	•5000000+01	•116°781 <del>*</del> 05
•950000C+0C	<b>.</b> 400000+00	.25000000+01	<b>.</b> 8398887 <b>.</b> 04
.9500000±00	.6000000+00	•1666667 <b>÷</b> 01	<b>.</b> 6665849∻04
•9500000e00	.8000000+00	.1257000+01	•5552285÷04
.95000000400	•1000000+01	.1000000+01	•4768262404
•9500000000	.2000000+01	•5001000+01	•2817728÷04
•95000009±00	.3000000+01	.3333333+00	•2006539 <del>+</del> 04
•9500000±00	.4CCOCCO+01	•2500000÷00	•1559342+04
.9500000 <del>4</del> 00	.5000CCO+01	.2000000+00	.1275552∻04
<b>.</b> 9500000£00	.8CC0000+01	.1250000+00	•8254915∻∩3
•9500000 <del>0</del> 00	.1000000÷02	·10000000÷00	•6683904÷03

TWO STAGES - STAGE 1 REUSABLE , STAGE 2 EXPENDABLE

ISP= 460.0

LAMBCA	WPL/WS	WS/WPL	DELTAV
. •81000000+00	.0000000	•0000000	.3012469+05
.80000000+00	.1000000-01	.1000000+03	.2951816+C5
•8uu0ûûü+u0	·2500000-01	.4000100+12	.2866827+05
,8040000¢÷00	<b>-</b> 500000-01	.20000000+02	.2738872+05
<ul><li>8€00€€€€€</li></ul>	•8000000-01	•1250000 <b>÷</b> 02	.2603848+05
<b>•</b> 8003Ç0¢+0C	•1000000+00	•100000¢+72	.2523038+05
•80000000÷0C	•20000c0+00	•5000000+01	.2198293+05
•8პსტეის∻ტე	.40C0CC0+00	•2500000+01	<b>.1777589+05</b>
.8000000+00	<b>.</b> 6000000∻00	·1666667+01	•1508076÷95
•8000000+00	.8000000+00	•1250000+01	•1316659÷05
•8000C0C+0C	.1000000+01	•1000000÷01	·1172020÷05
00+00000008	·2000000+01	•5000000+00	.7679677+04
• 8 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	.3000000+01	•3333333+00	•5756424+04
•800000+00	•4000000÷01	•25070NN+00	.4614705+04
•8∪∪000∪0+0C	•5000000+01	•2000000+00 ·	•3854722+04
, 8000000c+n¢	.8000000401	·1250000+00	•2584489±04
•8小ᲘᲔᲜᲔᲔ५ᲔᲔ	•1000000+02	.1000000+00	.2120103+04
•825000C÷0C	.0000000	•000000	<ul><li>3246374÷05</li></ul>
•8 250000+0 C	·1000000-01	•1000000+03	.3175409+05
•8250000+00	.25000C0-01	•4000000÷02	.3076734+C5
.8250000+00	-5000CGO-01	• 2000000+02	£2929724±05
.8250000+0C	.8C00000-01	•12570 <del>3</del> 0+32	.2776417+05
.8250000+0C	•1000000+00	•1000000÷02	.2685457÷05
• 825000C+0C	-2000000+00	•5000Q00÷01	+2325131+05
•8250000÷00	•4CCOCCO+00	•2593000+01	.1868C14+05
•8250000±0¢	<b>.</b> 6€000000÷00	.1666667+01	•1579399∻05
•8250C0C+0C	•8C00000+00	•1250000.+01	·1375944+05
•8250000÷00	.1000000+01	•1000000+01	.1222916+05
•825000C÷0C	-2000000+01	•5000000+00	.7981019+04
•825000C+0C	.300000+01	•333,3333+00	.5971105+04
•8250 <u>90</u> 0+00	•4CCQQCG+Q1	•250/1000+00	•4781433+04

TWO STAGES - STAGE 1 REUSABLE , STAGE 2 EXPENCABLE

ISP= 460.0

•			
LAMBCA	WPL/WS	WS/WPL	DELTAV
.82500CQ+0C	•5000000+01	. •2000000+00	.3990973+04
•8250000+0C	•8000000÷01	•1250000÷00	.2672414+04
.825000C+^C	.1000000+02	.10000000+00	.2191188494
8500000±00	•0000000	•000000	.3513313+C5
.8500000409	·1000000-01	•1000000+03	.3428758÷C5
<b>.</b> 8500000+00	.2500000-01	•4000000+02	.3312373+05
.8500000÷00	•5000CCO-01	•20000000÷02	•3141300+05
•8500C00+0C	-8000000-01	•1259000+92	•29655 <b>0</b> 5+05
.8500CCC <del>+</del> 0C	•1000000÷00	•1000000+02	•2862336÷05
•8 <i>5</i> 000000+00	·2000000+00	•5000000+01	•2460456+05
.85090001+00	•4 <b>0</b> 00000+00	<pre>-2500000+01</pre>	•19627C4÷05
<b>.</b> 850000€∙0€	.60C00C0+00	.1666667+01	•1653423+05
<b>.</b> 8500000+00	-8C00CC0+00	•1250000+01	• 1437139 + 05
<b>.</b> 85000000+00	-1000030+01	.1000000+01	.1275249+05
<b>.</b> 8500000∻00	.200000+01	•5003000+00	.8287799∻04
•8500 <b>0</b> 20+00	.3000000÷01	.3333333+00	•618865 <u>0</u> +04
<b>.</b> 85000^^+00	.4CCOOCO+01	•2500000+00	•4949924+04
<b>.</b> 85000000+00	.50000004C1	.2000000+00	•4128417+04
<b>.</b> 85000000+00	.8C00000+01	•1257900÷09	•2760845÷94
<b>.</b> 85000000+00	.1000000+02	.10000C+00	•2262608±04
•875900C+AC	-000000	<b>,</b> 0001000	。3824872+05
.8750000+0C	1000000-01	.10000000+03	•3721569+05
<b>.87</b> 50000+0C	·25C09C0-91	•40000000+02	.3581343+C5
•8750C0C+00	.5000000-01	<b>.</b> 2000000÷02	<b>.3378889</b> +05
•8750 <u>0</u> 00400	.8000000-01	.1250000+02	.3174774+05
•8750CQQ+QC	<b>.</b> 1000000+00	.1000000+02	•3056595+ <del>0</del> 5
.8750ccc+nc	.2C000C0+00	•5000000+01	.26N5515+Q5
•8750000÷00	-4C00000+00	.2500000+01	<b>-2062103+05</b>
.8750000+00	•600000+00	.1666667+01	•173C378÷∩5
.8750000+0C	-8C00000+00	.1250700+01	.1500386+C5
•87500 <u>0</u> 0+00	.1000000+01	·1000000+01	.1329120+05

TWO STAGES - STAGE 1 REUSABLE , STAGE 2 EXPENDABLE

ISP= 460.0

LAMBEA	WPL/WS	MZ\Mbr	CELTAV
.~875000C+0C	.2C00000÷01	•5000000÷00	.8600272+04
.875000C+0C	.3000000+01	.3333333÷00	.6409160404
.87500000+00	.4CC000C+01	.2500000+00	.512G229*C4
.87500000+00	.5000000+01	.2000000+00	.4267083+94
.8750C0C+OC	.8(00000+01	·1250100÷00	.2849792*04
.8753000+00	.1000000÷02	<u>.1000000</u> 00	•2334365+04
.900000C+1C	.000000	•0000000	·4200299÷95
•3000000000	.1000000-01	.10000000+03	•4069417+05
• 90000000+00	.2500000-01	.40000000÷02	.3895312+C5
.9000000+00	<pre>+5000000-01</pre>	•2000000÷02	<b>.</b> 3650165+05
.90100001400	10-0000008.	.1250C00+C2	•3409236+05
~900000c+00	•1000000+00	<b>.10</b> 07100∻02	.3272159405
.90000C0+0C	.2000001÷00	•5000 <u>000</u> 01	•2761851 <b>∻</b> 05
•90000000+00	• <b>%</b> C C O C C C <del>C</del> O O	.2500000+01	·2166727+N5
<b>"</b> 900ე00ე÷00	•6000000+00	.1666667÷01	.1810531+C5
。9nn0Jņ0+n0	.8000000+00	.1250770+01	.1565851+95
.90900000+0C	.1C00000÷01	.10000000+01	.1384637+05
.9000000C+0C	.2000000+01	<b>.</b> 5000000÷00	.8918712+04
•900000C+0C	.30000C0+01	.3333333+00	.6632745404
<b>.</b> 9000000000000	4CC0090+01	•2500100÷01	.52924Q0+04
•90000000+00	.5000000+01	.2000 <u>0</u> 00+00	•44n6599÷C4
• 900 000 0+00	.8CGOCCC+91	<b>.</b> 125/100∻00	·2939261+n4
* <b>3</b> 00000000+00	.1000000402	.1000000400	·2406464*04
• \$250CCC+0C	-0000000	~0000000	•4675378+05
•925000C÷0C	.1000000-01	•1000000÷03	.4499817+05
•9250000+0C	.2500000-01	•40000000÷02	<b>.</b> 4273646+05
•9250000400	.5000CCO-01	<u>-20</u> 99000+02	•39669C6+C5
•9250000+00	.8C00CC0-C1	.1250000÷02	.3676101405
.9250AQQ+AQ	.1000000+00	·1000000+02	.3514482+05
•925000C+0C	.2000000+00	.5000000÷01	.2931413+05
•9250000±00	.4CC0000+00	.2500000+01	.2277190÷05

TWO STAGES - STAGE 1 REUSABLE , STAGE 2 EXPENDABLE

ISP= 460.0

LAMBDA	WPL/WS	WS/WPL	DELTAV
. 9250000+00	•6000000+00	.1666667+01	.1894192+05
<b>%9250000400</b>	.80000000+00	.1250^00+11	•1633727÷05
.9250C0C+0C	•10000000+01	•10000000+01	·1441926+05
•925000C+0C	·2000000+01	•50000CC+00	•9243422÷74
•9250000+QC	•3000000+01	•333333÷00	•6859518+C4
•9250C^O+OO	<b>.</b> 4000000+01	•25nnn00+0n	•5466494*n4
<b>.</b> 9250011+00	.5000CC0+01	.20¢4000+40	.4548197+04
•925ṇṇṇᲘ÷ṇ <b>ṇ</b>	<b>.</b> 8000000+01	·1250000+00	.3029261+94
•9250000+0C	<b>.</b> 1590900+02	.1000000+00	•24789n9÷04
<b>.</b> 95000000+00	•0000000	• 6000000	<b>.</b> 5329839+95
<b>.</b> 9590900+00	*1000000-0F	•1000100+03	•5069C83+Q5
•95000001+00	.25000CG-01	.4000000492	.47523(9+05
•9500000+00	•500000C-01	.2000000+02	•4348640 <del>*</del> 05
• 950QQQC+QC	.8000000-01	•1257000+02	•3986292+C5
•95000000+00	•1000000÷00	<b>.</b> 10000001+02	.3791473+05
•9500CCC+OC	.2000000+00	.5000400+AI	•311 <i>6</i> 708+05
.9500000+00	.4GC00C0+01	.2500000+01	•2394227÷95
•9500000400	.6¢¢09¢0+9A	.1666667+01	.1981722+95
•9500000+00	•800000C+110	.125/10/10+01	.1704208+05
•9549000409	•1000000+01	•1000000+01	•1501128+05
•950 <b>0</b> 0000000	.2000000+91	.50 <u>0</u> 1000000	•9574730÷04
.9500CPC+0C	.3000000+01	.3333333+00	•7989604÷04
•9500000+00	.4000000+01	.2500 <u>0</u> 00+00	.5642568÷C4
•950 <b>00</b> 000+00	•500000+01	2001000+00	•469C7C9+04
•9500000÷00	.80000000001	.1250000+00	.3119801+04
•950000Q÷0C	.1000000+02	.1000000+00	.2551705+04

THJ STAGES - STAGE 1 EXPENDABLE , STAGE 2 REUSABLE\*\*\*PAYLCAD DELIVERY

ISP= 460.0

LAMBCA	WPL/WS	WS/WPL	CELTAV .
.8000000+00;	.0000000	.0000000	•15690C2÷05
.80000000000	.1000000-01	.1000000+03	•1561140+05
.8000000400	-2500000-01	•4000000+02	.1549431 + 05
•8000000±00	.5000000-01	.2000000+02	.1530142∻05
00+00000108	-8000000-21	·1250000+02	·1507369+05
•8 <u>20 0 0 0 0 0</u>	.1000000+00	•1000000÷02	.1492417÷05
) C+000CC08•	.2000000+00	•5000000+01	<ul><li>1420434*05</li></ul>
.80000000+00	.4CC00C0+00	.2500000÷01	.129C241÷C5
•80∩JJJJJ+0J	.60000000	.1666667+01	.1177368+05
•8000C00÷0C	.8000000+00	.1250000+01	.1079855:05
•80000000¢0C	.100000+01	.1000000+01	•9955186÷04
.8000C10+0C	.2000000+01	<b>.</b> 5000000+00	<b>.70</b> 88488∻04
•830 <u>0</u> 00400;	.3000000+01	.3333333+00	.5474634±74
00+0000000	.4000000+01	·2500000÷00	.4452985+04
•8000000+00	.5000000+01	<b>.</b> 2000010400	•3750766÷04
.80000000+00	.8CC0000+01	•1250000÷00	•2544243 <b></b>
•80000000+00	.1000000+02	•10000000+00	•2994562÷94
.825000C+0C	•0000000	• 6000000.	•1683395÷05
.825000C+0C	.1000000-01	·1000000+03	.1674663+05
•8 25000 C÷0 C	.25000C0-01	.4000000÷02	•1661658÷05
.8250000÷00	.5C000C0-01	.2000000+02	•1640233÷05
•8250000€00	.8000000-01	•1250000÷02	•1614942 <del></del>
•8250¢nc+n¢	.1000CCO+00	·1000000+02	•1598339÷05
8250000¢00	.2000000+00	.5000000+01	•1518450÷05
.8250000÷0C	.4000000+00	.2500000+01	•1374305÷05
.8250000÷QÇ	•600000+10	.1666667+01	.1249916+05
.8250000+00	.8000000*00	.1250000+01	•1143026÷05
•8250000+00	.1000000+01	.1000000+01	1051074+05
.8250000÷00	.2C0000C+01	•5000000÷00	•7422254+04
•825000 C∻∩ C	.3000000+01	.3333333+CO	•5708385÷14
.8250C0C+00	.4000000+01	.2500000+00	•4631893+94

THO STAGES - STAGE 1 EXPENDABLE , STAGE 2/ REUSABLE\*\*\*PAYLOAD DELIVERY

ISP= 460.0

LAMBCA	WPL/WS	hS/WPL	DELTAV
•8250000÷00	·5000000+01	.2000000+00	.3895251÷C4
_ <b>.</b> 8250000400	•8000000+01	.1250000+00	•2635632 <del>+</del> 04
.825900C+0C	.1r00000+02	•1000000+00	.2167906+94
.85000000+00	•000000	•0000000	.1813381+05
.8500000000	.1000000-01	•1000000+03	.1803586+05
•8500000 <del>+</del> 00	.25000C0-01	•4 <b>000000+02</b>	•1788996+95
.8500¢00÷00	•500000 <del>-</del> 01	•2000000÷02	•17649 <del>6</del> 2+05
.8500000+00	.8000000-01	.1250000+02	<b>.17</b> 36593 <b>+</b> 05
.85000000400	.1C000C0+00	.1007990÷02	·1717972+05
.85000000+00	•20000c0+0n	.5000000 <del>4</del> 91	·1628441+95
<b>.</b> 85000000+00	.40000C0+00	•2500000+01	•1467406+C5
<b>.</b> 85/\0000+00	.6000000+00	.1666667+01	•1329273+05
.8500000+00	.8000000+00	.1250000+01	.1211376+05
•85700CC+00	•10330CO+01	•1000000÷01	.1110622+05
.85000000+00	.2000000+01	•5000000 <del>+</del> 00	•7769887÷04
.8500000+00	.3C000C0+01	.3333333+00	•5948688+04
.85∩0000C+0C	<pre>.4C00000+01</pre>	•2500000+00	•4814352+04
<b>.</b> 85000000+00	.5000000÷01	•2000000+ <del>0</del> 0	•4042123÷04
.8500000+00	.8000000+01	•1250000+00	22727941+04
.8500000+00	<pre>-1000000+02</pre>	•1000700±00	.2241834+04
.8750C0C÷0C	•0000000	• 0000000	.1964564+75
.87500000+00	.10000000-01	.1000110÷03	.1953427+05
•8750000÷00	.25000CC-01	•4000000÷02	•1936821+05
.8750000+00	.5000000-01	•20000000÷02	•1909477÷05
.8750000÷00	.8C00GC0-01	.1250000+02	•18772C7+°5
.8750C0C+00	•1C00000+00	•1000000+02	•1856031÷05
.8759C0C+QC	.200000+00	•5000000+01	.1754315+C5
.875000040C	•40000C0+00	.2500000+01	.1572155+95
.8750000+0C	.6000000+00	.1666667+01	·1417161÷05
.8750000÷00	•8000000+00	.1250000+01	•1286044÷C5
.8750000÷00	.10000CO÷01	.1000000+01	.1174934+05

THO STAGES - STAGE 1 EXPENCABLE, STAGE 2 REUSABLE\*\*\*PAYLOAD DELIVERY

ISP= 460.0

LAMBCA	WPL/WS	WS/WPL	DELTAV
.875000C+0C	-2070000+01	•5000000+00	•8132919÷04
.8759C20+0C	.3C00C00÷01	•3333333÷n0	.6196031+04
•8750000+0C	.40C00C0÷01	<u> </u>	•50°C836+04
%8750000+00	•50000C0+01	•2007000÷00	.4191483+C4
.8750000+00	<b>.</b> 8000000+01	•125000 <b>0</b> +00	•2821195+04
.8750C00+0C	<b>.1</b> 000000+02	•1007000+00	·2316358÷04
•9000000+00	•0000000	.0000000	<ul><li>2146321+05</li></ul>
.9000000+00	.1000000-01	• <b>1</b> 000000+03	·2133375+05
•90000000+00	<pre>-2500000-01</pre>	•4000 <u>0</u> 00+02	.2114093+05
<b>.</b> 9000000400	•5000C00-01	•2000000+02	•2082329÷05
.9000000+00	-8000000-01	•1250000+02	<b>.</b> 2044853+05
•9000000000	<b>-1</b> 000000+00	<b>-1000000</b> 00402	.2020268+05
•9000000+0C	<b>.</b> 2000000÷00	•5000000÷01	.1902364+05
•9000000400	-4C009C0÷00	•2500000+01	<b>.</b> 1692558+05
<b>~</b> 9000000400	•6¢¢00c0+00	.1666667+01	•1516094÷05
.9000000+00	•8¢¹00¢0+00	.1250000+01	<b>.</b> 1368626 <b>÷</b> 95
.9049000400	.1000000+01	<b>.</b> 1000000+01	<b>.</b> 1245046∻05
* <b>Მ</b> ᲘᲢᲔᲔᲔᲘ+ᲔᲢ	<b>.</b> 2000000∻01	•5001000+00	.8513172+04
<b>.</b> 90000000400	.3000000+01	•3333333+C0	•6450957±04
.90000000+00	.4000000÷01	•2500000÷00	.5191478+04
* <del>3</del> 0000000+00	<pre>&lt;5C00C90+01</pre>	•2000000+00	.4343444+04
.9000000400	.8000000∻01	•1250000+00	•2915417÷04
. 90000000+00	•1000000+02	.1000000+00	•2391490÷04
•92500000+0C	-0000000	- 0000000	•2376219÷05
•925000C+0C	.1000000-01	· .1000000+03	<b>.23</b> 60668 <b>÷</b> 05
•925000C+0C	·2500000-01	•40000000+02	•2337504÷05
•9250000 <del>+</del> 00	•500000 <del>-</del> 01	•2000000+02	.2299351÷C5
:925000C+00	.8000CCC-01	•1250000÷02	•2254356÷05
.9250QQC+0C	<b>-</b> 1000000÷00	.1000n00+02	.2224858+05
•9250000÷00	•2000000÷00	•5000000 <del></del> 01	•2083757+05
9250000+00	<b>.</b> 4000000+00	12500000+01	.1835266∻05

TWD STAGES - STAGE 1 EXPENDABLE , STAGE 2 REUSABLE\*\*\*PAYLOAD DELIVERY

ISP= 460.0

LAPECA	.WPL/WS	WS/WPL	DELTAV
•9250000±0¢	•6000000+00	.1666667+01	.1629977+C5
•9250000+00	<b>.</b> 8000000+00	.12599990∻01	.1461456÷C5
•9250000+0C	•1000000÷01	.10000000+01	·1322401+05
•925000C+AC	<pre>-2000000+01</pre>	.5000000400	·8912841+04
.92500nc+nc	.3CCOOCO+01	.2333333+00	.6714C85+P4
•9250000+0C	.4CC0000+01	·2500000÷00	.5386522+94
•9250000+0C	•50CQC90+01	.2000000400	.4458124+04
•925000C+00	.8000000+01	.1250000+00	·3010634+04
•9250000+00	.1000000+02	.1000000+00	·2467244÷04
•95 <u>0</u> 0000400	.0000000	.0000000	.2693677+05
<b>.</b> 95000000+00	.1000000-01	.1000000403	.2673805+C5
•9500000+00	•2500000-01	•4000000÷02	• 2644205+95
•959 <u>000</u> 000	•5C00CC0-01	•2000Q00÷02	.2595467+05
.9510C00÷00	.8000000-01	.1250000+02	.2538042+05
•950000C+00	·1000000+00	.10000000402	·2500448+05
•9500C00+00	.2000C00+00	.5000000401	·2321561+05
<b>。</b> 950900C+0C	<b>.</b> 4090300+00	.2509000÷01	.2012687+95
•95000000+00	•6000000+A0	•1666667÷01	•1765426+05
•9500000 <del>+</del> 00	•8000000+00	.1250000÷01	.1568180+05
•9500000400	.1000000+01	.1000000+01	•1409106+05
•9500000+00	.2000000+01	.50 <u>0</u> 000400	•9334605+04
•950000C+00	.3000000+01	。3333333÷00	.6986118494
.950000C+0C	.4000000+01	.2500000400	•5586239÷04
•9500000+00	.5CGOCGO+01	•2000000€00	.4655651+04
.9500000÷00	.8000000+01	.1257000+00	.3106874404
•9500000000	.1000000+02	·100nn00+n0	.2543632+94

THU STAGES - STAGE 1 EXPENDABLE . STAGE 2 RELINABLE\*\*\*PAYLOAD RETRIEVAL ISP= 460.0

LAMBCA	WPL/WS	WS/WPL	DELTAV
.8000000000	.0000000	•0000000	•1569002+05
.8000000400	.1000000-01	.1002020+03	.1545405÷05
00+0000098	.2500000-01	•4000000+02	.1512050405
.80000000+00	•5000GCC-01	.2000000402	•1461181÷05
.8000000÷0C	.8CCOCCO-01	.1250000+02	•1406622+05
•8000000÷nc	·1000000+00	•10000n0 <del>+</del> 02	•1373521÷05
.80000000+00	•2000000 <del>+</del> 90	.500200C+Q1	·1236883+05
.8000000+00	•4¢00000+00	.2500000÷01	•1059088+95
<b>.</b> 8000000+00	.6000000+00	.1666667+01	•9234569+04
.8000000+00	.8000000+00	.1250000+01	•8295386+04
.80000000+00	-1000@00÷01	.1000000+01	•7560251+04
.80000000+0C	-2000000+01	.5000000÷00	•5360476+04
.80000000+00	.3000000+01	.3333333+00	.4212962+04
.8000000+00	.4000000÷01	•2500000÷00	•3489176+94
.8000C00+00	.5000CCO+01	•2000000+00	•2985428+04
*8000000÷00	•8,000000÷01	•1250nn0+00	•2094691 <del>*</del> 04
<b>.</b> 8000000+00	•1000000+02	•1000000÷00	•1750599+04
.8250C9C∻OC	•0000000	• 0000000	•1683395 <b></b> ∻05
.8250C00÷0C	.1000000-01	•1000000÷03	•1655460÷05
<b>.</b> 8 2500000400	.2500000-01	•4000000÷02	.1616286+05
<pre>-8250000÷00</pre>	.5000CCO-01	.2000000+02	.1557194+05
.82500000+00	•8C70000-01	.1250000+02	<b>.</b> 1494603÷05
~8250C00+00	.1C000C0+00	•1000000+02	•1456997+05
.825000C+0C	.2000000+00	.5000000+01	•1304176±05
.82500000÷00	.4C000C0+00	.2500000÷C1	•110C299+05
•825000C+OC	.600000+00	.1666667+01	<b>•9645258◆</b> 04
<b>.</b> 8251010+00	•8000000÷00	•1250000÷01	<b>.</b> 8647883+94
.8250000+00	.1000000+01	•1000000÷01	<b>.7</b> 871843∻94
•8250000+00	.2000000+01	•5007700 <del>+</del> 00.	•5567937±04
<pre>.8250000+00</pre>	.3C000C0÷01	•3333333+00	•4373674+04
.825000C+0C	.4C000C0÷01	•2500000÷c0	.3622006+04

THO STAGES - STAGE 1 EXPENDABLE . STAGE 2 RELSABLE\*\*\*PAYLCAD RETRIEVAL ISP= 460.0

LAPBCA	WPL/WS	WS/WPL	DELTAV
.8250000+0C	.5000CC0+01	.2000000+00	·3099307+C4
.8250000+00	.8000000÷01	.1250000+00	.2175465+04
.82500000+00	-1C00C00+02	.1000000+00	.1818566+04
.8500000+00	.000000	. 0000000	<b>.</b> 1813381+05
.8500000+00	.1000000-01	1000000+03	•1779651+05
.8500000+00	•25000C0-01	•400000n+02	.1732841+05
<b>.</b> 85000000400	.5000CC0-01	.2000000+02	.1663214+C5
.8500C00+00	.8000000-01	•1250000÷02	.1590613+05
.85000CC+00	.1000000÷00	.1000000+02	.1547489+05
<ul><li>850000C+0C</li></ul>	•2000000+0n	.5000000÷01	•1375561+05
.8500000+00	•4000000÷00	.2500000+01	•1152491÷05
.85000000+00	•6000000+0 <u>0</u>	.1666667+01	.1006821+05
.85000000+00	•8¢000c0∻co	.1250000+01	.9009066+04
•85090000+90	•1000000÷01	.1007000+71	.8190136+04
.85000000+00	.2000000+01	.5000000+00	.5778761+04
•8500000400	*3C00000+51	.3333333+00	.4536881+04
<b>.</b> 8500000+00	.4000000+01	.2500000+00	.3756932+04
•8500C0C+0C	.5000000+01	.2000000+00	.3215042+04
<b>.</b> 8500000+00	.80000C0+01	·1250000+00	.2257676+04
•8500000÷00	·1000000+02	.10000000000	.1887800+04
.8750CCC+0C	.0000000	•000000	.1964565405
.87500C0÷00	.1000000-01	.10/20/20+03	.1922718+05
.875000C+0C	.2500000-01	.4000000+92	.1865468+05
•8750000÷0C	•5ccocqo-01	.2000000+02	.1781887+05
.875000C÷00	.8000000-01	.1250100+02	.1696480+05
•8750000+00	.1000000+00	.1000000+02	.1646484+05
·8750000+00	.2000000+00	.5000000+01	.1451633+05
.875000C+0C	.4000000+00	.2500000+01	.1206841+05 .1050420+05
.8750000+00	.6000000+00	.1666667+01	.9379379+04
.8750000+00	.8000000+00	.1250000+01	.8515425+C4
·8750000÷00	.1000000+01	.1000000+01	*071725C4

IND STAGES - STAGE 1 EXPENDABLE . STAGE 2 REUSABLE\*\*\*PAYLOAD RETRIEVAL

LAMBCA	WPLŻWS	#S/APL	DELTAV
.8750C00÷00.	.2000000+01	.5000000÷00	•5993073+04
.8750000+0C	.3000000+01	.3333333+00	.4702686+04
.8750000¢00	.4000000+01	•2503000+00	.3894048+04
.8750000±00	.5CCOCCO+01	.2000000+00	.3332715*04
.8750000÷00	.8000000+01	•1250000+00	.2341401÷04
_•8750000+00	•1000000+02	.1000000+00	.1958369÷04
.90000000+00	•000000	•0000000	.2146321+05
.9000000¢0C	-10000C0-01	.1000000÷03	.2092338+05
•9000000+00	·25000C0-01	•4900900+92	<b>.</b> 2019996+05
•90030000+00	•500000-01	•2000000÷02	.1917099+05
.9000000400	.80000CC-C1	•125 <u>0</u> 000÷02	.1814756+05
•9000000400	•1000000÷00	•1000000÷02	.1755966+05
• 900000000+00	.200000÷00	•5000000÷01	.1533131+05
*80000000¢0C	.40000C0+00	•2500000+01	· .1263548+05
<b>.</b> 9000000+00	<b>.</b> 600000+90	.1666667+01	•1095411+05
<sup>°</sup> 8000 000 000 <del>0</del> 00	.00+000008	.1250000+01	•9759299+04
<b>.</b> 9000000+00	.1000000÷01	•1000000+01	<b>.</b> 8848025±04
.9000000+0C	.2000000+01	•5001100 <del>4</del> 00	•6211008+04
•9010CC0+00	•3000000÷01	.3333333+00	•4871198÷04
•900000C+0C	.4C000000±01	•2500000 <del></del> 00	•4033452÷C4
.90nn <b>on</b> 0+01	-5C00CCO+01	°50000000+00	€3452423÷04
*8000C0C+00	.8CQ00C0<11	· .1250000÷00	•2426718÷04
•9000000+00	.1000000+02	• 1000n00+n0	•2030347+04
<b>.</b> 9250000400	•0000000	• 0000000	•2376219+05
•9250CCC+0C	.1000000-01	£04000001¢03	•23N22D6+D5
.9250000+0¢	.25000CC-C1	•400000C+02	•2206218÷05
•9250000+00	.5C00000-01	.2000000+02	.2074898+05
<b>.</b> 9250010+11	.8CC00C0-01	.1250000+02	.1949164+05
•9250000000	.1000000+00	.1000000002	.1878740+95
·9250000+00	.2000000+00	.5000000+01	.1620990+05
.925000C÷00	.4000000+00	.2500000+01	.1322847+05

THO STAGES - STAGE 1 EXPENDABLE , STAGE 2 REUSABLE\*\*\*PAYLCAC RETRIEVAL ISP= 460.0

LAPECA	WPL7WS	WS/WPL	DELTAV
•9250000400	.6CC00C0+00	.1666667+01	·1141887+05
.9250000+00	•8000000¢00	.1250000+01	•1014934+05
•9250000+00	.1000000÷01	.10000000+01	•9188271+04
.925000C÷0C	•2000000÷01	<b>.</b> 5000100÷00	.£4327C7+N4
•9253000*00	.3000000+01	.3333333+00	•5042534÷04
•9250000÷0G	.4C000C0+01	.2501010+00	•4175252404
•9250000÷00	•5000000÷01	.2ànacao÷rn	<b>.</b> 3574264+04
.9250 <u>0</u> 00÷00	.80000000+01	•125000C+00	•2513716+04
•9250000+00	•100000+92	•1000010+00	•2103813÷04
<b>.</b> 950000€00	.000000	• 0000000	•2693677+05
.9500 <u>0</u> 0040C	•10000CO-01	•100100C+13	·2580648+Q5
• \$5000n0+0 <i>0</i>	<b>.</b> 2500000-01	•4000000¢02	•24425 <b>7</b> 0+05
•9500000+0C	•500000 <del>-</del> 01	.2000000+02	<b>~2265478</b> +95
•9500000÷00	<b>.</b> 8000000-01	.1250000+02	•2105437+05
.9500000+00	.1000000÷00	£10000000÷02	-2018942+05
.9500000 <del>4</del> 00	.2000000+00	•50000000+01	•1716418+05
.950 <u>0000</u> 00	.4cqqcqq+qq	.2500000+01	•13850C6+05
.95000CC+0C	<b>.</b> 6000000+00	•1666667+01	•1189956+C5
•95000000+00	.8ccacca*0a	•1250000401	.10550C7+05
•9500 <u>0</u> 00+00	.1000GCC+01	.1000000401	•9536524±04
<b>~9500000+00</b>	+2000000+01	<b>.</b> 5000000+90	£6658323+94
.9500C0C+9C	.3000000+01	.3333333+00	.5216818÷74
.9500000+0C	.400000C+01	•2500000+n0	•4319562+C4
•9500000÷00	•5C00000+01	•2000000+00	•3698347+04
•95n00n0+n0	.80000000+01	•1250000+00	.2602486+94
•9500000÷00	.100000C+C2	•100000C+00	.2178852+04

INU STAGES - STAGE 1 EXPENCABLE , STAGE 2 REUSABLE\*\*\*ROUNDTRIP

		DELTAV
.8000000+00 .0000000	0000000	.1569002405
.800000+00 .1000000-0	1 .10000000+03	.1537810+05
.8000000÷00 .2500000-0	1 .4000000+02	.1494049+05
•8000C00+00 •5C00CC0-0	1 .20000000+02	.1428944+05
800000+00 .8000000-0	1 .1250000+02	.1358227+05
.8000000÷00 .1000000+0	0 •1000090÷02	.1316359+05
.8000000+0C .2000000+0	0 •5000000+01	•1147447 <i>◆</i> 05
•8000000¢0C •4000000+0		•927C485÷04
0+0000000. 00+0000008.		<b>.</b> 7850485÷04
.8000000+00 .8000000+0		•6839545÷N4
.8000000+00 .1000000+0		•6075281÷04
.80000000+00 .2000000+0		•3946425÷04
.80000000000000000000000000000000000000		.2941489+04
.8000000+00 .4000000+0		.2349171+94
<b>.</b> 8000000+00 <b>.</b> 500000+0	1 •2000000+00	•1957C25+94
•8000000+0C -8CC0C000+0		.1305898∻04
.8000000+00 .1G00000+0	2 .1000000+00	.1069307+04
.8250C00+0C .0C00000	.0000000	<b>.</b> 1683395+05
•825000C+0C •1000000-0	1 .1000000+03	<b>.</b> 1647056+05
.8250000+0C .25000C0-0	1 •40000000÷42	.1596467+05
<b>28</b> 250000+00 <b>3</b> 5000000−0	1 .2000000+02	•1520961÷05
<b>.</b> 8250000000 <b>.</b> 8000000000000000000000000000000000000	1 .1250000÷02	.1442023+05
.825000C+0C .10000000÷0	0 .1000000+02	•1395117÷05
.825000C÷0C .20C0000÷0	0 .5000000+01	<b>.</b> 1208539 <b>+</b> 05
•8250C0C+0C •4CC0CC0+0	0 .2500000+01	•9701966+04
.8250000+00	0 .1666667*01	•8188925 <del>+</del> 94
.8250000+00 .8C000C0+0	0 •1250000+01	<b>.</b> 7119980+94
.825000C+0C .1CCOCCO+C	· · · · · · · · · · · · · · · · · · ·	.6315650+04
.8250000+00 .2000000+0		.4089038+94
-825000C+00 +30000C0+0		•30437C9÷04
.825000C+0C .4000000+0	2500000+00	.2429013+04

TWO STAGES - STAGE 1 EXPENDABLE , STAGE 2 REUSABLE\*\*\*RCUNDTRIP

ISP= 460.0

LAMEDA	WPL/WS	hS/WPL	DELTAV
.8250C0C+0C	.5000000+01	.2000/00÷00	.20225€7*04
. <b>₹</b> 82500000+00	.8000000+01	·12500000+00	.1348639+04
•8250C0C+0C	.1CC0000+02	.100/000÷/0	.1104003+04
.85000000+00	•0000000	. 0000000	.1813381 + 05
<u>.</u> 85000000+00	.1C000C0-01	.10 <b>^</b> 000+03	.1770270+05
<b>.</b> 85000000+00	·25000C0-01	<b>.</b> 4000000402	.1710860+05
<b>.</b> 8500000≎00	•500000-01	•2000000÷02	.1623379+05
<u>.</u> 8500Anç±na	•80000co-oi	.1250000+02	•1533280÷05
•8540000¢00	<b>.</b> 10000co∻00	•1000000+02	·1480301÷05
<b>.</b> 8500000+00	•2000000÷00	•5/00/000+01	•1273173+05
•8500C00+00	•4CCDDQQ+DQ	25000000+01	•1014931÷05
•8500000¢0¢	•60000 <u>0</u> 0+00	.1666667+01	•8536538÷04
<b>.</b> 85000000+00	.8000000000	.125000C+01	.7406469*04
.850000040C	.1000000÷01	.1000000+01	•6560347÷C4
.8500000+00	-2900000+01	•5000200+00	•4233087 <del>+</del> 94
<b>.</b> 8500000+00	.3000000+01	.3333333+00	•3146652÷04
•8500CCC+9C	.4C00CCD+C1	•2500000÷00	·2509294+04
<b>.</b> 85000000+00	.5C00000+01	•2000000÷00	.2088443÷04
<b>.</b> 8510000400	.80000C0+C1	•1251900÷0 <del>0</del>	.1391486÷04
<u>.</u> 8503000;400	~10000C0+02	.1 <u>0</u> 02730∻00	<b>₃1138781+</b> 04
<b>.</b> 8750000000	•000000	• 0000000	•1964564 <b>+</b> 05
.8750CQC+9C	<b>.</b> 1000000-01	.1000000+03	.1912118+05
.875000C <b>∻</b> 0C	.25000C0-01	•4000°00÷02	•184¢847÷95
.8750000÷00	.500000-01	`•2000000+02	.1737772÷05
<b>.875</b> 0000∻00	.8000000-01	.1250000+02	.1633627∢∩5
•8759000÷00	.1C000G0+00	•100 <u>200</u> 00÷22	.1573218+05
<b>.</b> 875000C+0C	•2000000÷00	.5000000+01	•1341845÷05
<b>.</b> 87500r¢+00	.4000000÷90	•2500000 <del>+</del> 01	.1061389 <i>+</i> 05
•875000¢÷0¢	<b>.</b> 6000000+00	.1666667+01	•8893887¢04
<b>.</b> 8750000c+00	•8600330440	•1250000÷01	•7699300+04 <sub>.</sub>
.8759999400	.1C000C0+91	.10000000+01	.68C9543+C4

IND STAGES - STAGE 1 EXPENDABLE , STAGE 2 REUSABLE\*\*\*ROUNCTRIP

LAMBCA	WPL/WS	#S/WPL	DELTAV
.87500000+00	£2000000+01	•5000000÷00	.4378603+04
<b>.</b> 87500∩0∻∩∩	-3000000+01	.3333333+00	•3250330÷04
<b>.</b> 875∩ባ∩0∻∩ሮ	.4C00000+01	.2500000+c0	•259C017+04
<b>.</b> 8750000+0C	•5C00000+01	•2007999+90	.2154595÷04
\$75 <u>000</u> 400	•8C00CC0+01	•1250000+30	•1434466+04
<b>.</b> 8750000400	•1000000÷02	•1000000+00	.1173641+04
•9000CCC+1C	•0000000	•0000000	•2146321÷05
.90000000+00	•1000000-01	·1000000+03	.2080149+05
•9000C0C+0C	·2500000-01	·4000000+02	.1992030+05
•9000000+00	•50C00C0-01	·20000000+02	.1867759+05
.9000000400	<b>.</b> 8000000-01	·1250000+02	•1745381+C5
•90000000	•1000000÷00	.1000000+02	.1675636+05
•900000000	•20000c0÷00	.5000000+01	•1415173÷05
• 90,00000+00	<b>-</b> 4099090+00	.2500000+01	.1109726+05
•9000000+00	•6000000+00	.1666667+01	•9261596÷04
\$000000¢00	•8C00C00+00	•1250000÷01	•7998788+04
• 9000000 +00	.10°00000+01	•1000000÷01	.7063418±04
.9000000+00	.2000000+61	•5000000+00	•4525616+04
•90 <u>00000</u> 0+00	.3C00000+01	.3333333+00	.3354754+04
•9000000+00	-40000C0+01	•2500000+00	.2671188+04
•9000000000	.500000÷01	•2000∩ <u>0</u> 0÷00	.2221048+04
•9000000+00	.8000000÷01	•1250000÷00	·1477573÷04
• 9 0 0 0 0 0 0 0 0 0	.1000cco÷02	•1000000÷00	.1208583+04
•925000C+00	•000000	• 0000000	·2376219+05
•9250C0C+0Q	•1000cco-o1	•1900000÷03	·2287800+05
•9250000±00	-2500000-01	•4 <u>00</u> 0000+02	.2173787+95
•9250010+00	·5C00000-01	•2001000÷02	.2018942+05
•9250000+00	-80000C0-01	·1250000÷02	·1871881+05
•9250000+00	.1000000+00	·1000000+02	·1790030+05
•9250000+00	·2000000+00	-5000000+01	.1493921+15
•925000C+QC	•4C000C0÷00	·2500000+01	•1160127÷05

TWO STAGES - STAGE 1 EXPENDABLE . STAGE 2 REUSABLE\*\*\*RCUNCTRIP

LAMBCA	WPL/hS	WS/WPL	DELTAV
•9250000+00	.6000000+00	.1666667+01	.9640349+04
•925 <u>10000+0</u> 0	.8000000+00	.1250000+01	<b>.</b> 8305268∗04
•92500C0÷0C	.10000000+01	•1000000÷01	.7322165÷04
.9250000÷00	<pre>-2000000+01</pre>	•5000100÷11	•467416)÷04
•9250000¢00	.3000000+91	.3333333+00	.3459933*04
•925000C+0C	<b>.</b> 4000000+01	.2500000÷00	.2752812+04
.9250000+0C	•50000000+01	•2000000 <del>+</del> 00	.2287802±04
•9250000+00	.80000C0÷01	.1250000+00	•15208C6÷04
•9250000+1C	.1000CCO+C2	.1000000+00	·1243608÷04
.95000n(+n(	.0000000	• 0000000	.2693677+05
•9500C^C+00	.1000000-01	.1001200÷03	.2562799+05
·9500000+0C	.2500CC0-01	•4000000+02	•2403685+05
•9500000+0C	.5000000-01	.2000000402	•220C699÷05
•9500000¢00	.8000000-01	•1250000÷02	•2018234÷05
•9500000+00	.10000C0+00	•1000 <u>000</u> 00	•1920016÷05
<b>.</b> 95000000+0C	•2¢¢0000+00	.5000000+01	.1579115+C5
•9500000+00	.4C100C0*00	.2500000+01	.1212780+05
•950000C+0C	6000000+00	.1666667+01	.1003091+05
•950000C+0C	.80 <u>0000</u> 000	•1259990÷01	.86191C7÷04
•9500000÷00	.1000000+91	.1000000+01	.7585990+04
•95000000;+00	.2000000+01	•50 <b>0</b> 00000+00	•4824267+94
.9500000÷00:	•3000000÷01	.3333333+00	.3565881+04
.9500000+00	.4C00000÷01	.250 <u>0</u> 000+00	.2834894+04
•9500C0C+0C	.5000CCO+01	•2000000+00	.2354861÷04
.95000n0÷n0	.8¢000c0+01	.1250000÷00	.1564165+04
•9590000C÷00	.1000000+02	.1000000+00	<b>.</b> 1278717+04

## THO STAGES - BOTH EXPENDABLE ISP= 460.0

LAMBDA	WPL/WS	WS/WPL	DELTAV
.80000000400	.0000000	•0000000	•3138003+05
<b>.</b> 8003000000°	•1c000c0-01	.1000000+03	.3075619+05
.8000000400	-25000C0-01	•4009000+02	<b>.</b> 2988098 <b>:</b> 05
<b>.</b> 8000C00+00	.500000-01	.2001100÷02	.2856C88+05
.80000000+00	•8000000-01	•1250000+02 ·	·2716454+05
•8303¢06÷0¢	.1000000+00	•1000000÷02	.263.2718+05
.80000000 <del>+</del> 00	·2000000÷00	•5000000+01	.2294894+05
.8000000400	.4000000÷00	.2500000÷01	.1854097+05
.8000000+00	-6CC0000+00	<b>.</b> 1666667 <b>÷</b> 01	.157CC97+05
.8000000±00	•00000000000	.1250n00÷n1	.13679(9+05
.8009000+00	.10000C0+01	•1000000÷01	•1215∩56÷05
.8000000÷00	•2000000+01	<b>₊</b> 5002010∻00	• <b>7</b> 892850+04
<b>.</b> 86000000÷00	.3000000+01	.3333333∻00	•58829 <b>7</b> 9+04
.8000000+0C	.4000000+01	.2500000÷00	•4698342+04
•8000000+0 <i>0</i>	•5CCOCCO+01	.2000000+00	<u>.3914049+04</u>
8000000±00	.8CCOOCO+O1	•1250000÷00	·2611797÷04
.8000000+00	.10000c0÷c2	.10000000+00	.2138615+C4
<b>.</b> 8250000+00	•0000000	• 0,00,000	•3366797÷05
+8251G1C+QC	.1000000-01	.1000000÷03	.3294112+05
•82500∩C∻0C	.25000CO-CI	•4001C10±02	•3192934+°5
•8251001410	-5000000-01	•2000000 <del>+</del> 02	•3041922÷∩5
•8250 <u>000</u> 0+00	.8000000-01	` <b>.</b> 1259000+02	·2884966+C5
<b>.</b> 825/1010400	•1C000CC+90	•1001000÷02	.2790234+05
•8250 <u>00</u> 0400	-2000 <u>0</u> c0+00	·•50C0000÷01	.2417079+05
.8250C0C+0C	.4C30CC0+00	<pre>.2500000+01</pre>	.1940393+05
<b>.</b> 8250000400.	.6000000+00	.1666667+01	.1637785+05
.825000C+0C	<u>-</u> 8000000+00	.1250000+01	.1423996+05
1.8,250000±00	.1000000+01	•1000∩10÷01 .	<b>.</b> 1263130+05
•825 <u>00</u> 00400	.2090009+91	ั •5000^00∻ถูก	.8178075+C4
.82500∩0∻00	.3000000+01	.3333333+00	<b>.</b> 6C87417+04
•825300C+00	.4000000+01	.2500100400	•4858027+04

# TWC STAGES - BCTH FXPENCABLE ISP= 460.0 /

LAPECA	WPL/WS	WS/HPL	DELTAV
•82599900∻0C	.5C00CC0+01	.2000000+00	.4045173÷04
· 82500000+00	.8000000÷01	.1250300+00	.2697269+04
•825000C÷0C	.10000C0÷C2	.1000000+00	.22080C7+04
<b>.</b> 8590000¢00	•000000 ·	• 0000000	.3626763+05
•8500CCC+0C	.1990000-01	.1000000+03	•3540540÷C5
•8500000+00	•2500000 <del>-</del> 01	.4002000+02	· •3421720÷05
•8500C0C+0C	•5CCOCCO-01	.2000000+02	.3246758+05
. • 85000000+00	<b>.</b> 8000000-01	.1250000+02	.3066559+05
•8500C0C+00	•1000000+00	.1000000+02	.2960602+05
•850000C+nc	•200000 <u>0</u> +00	•5000900+01	.2546345+05
•850000C+0C	<u>.</u> 4¢00000+00	•2500000+01	•2029863÷n5
.8500C^Q+0^	•6000000+00	.1666667+01	.17C73C8+05
•8500000¢00	00+000008 <b>。</b>	.1250000÷01	•1481294+ <u>0</u> 5
•8500000¢00	•1000000+01	.1000000+01	.1312069+05
<b>∙</b> 850000040¢	-2000000+01	.5000000+00	<b>.</b> 8466173∻04
•8500000÷0Ď	•3000CO+01	.333333+00	.6293304+04
•8500C10+9C	•4000000+01	.2500000÷00	.5018587+04
85000000+00	.5000CCO+01	•2000000÷00	·4176885+04
<b>.85000000+00</b>	.8000000+01	•1250090÷00	°2782972÷04
<b>.</b> 85000000÷00	.10000c0÷02	.1000000+00	.2277562+04
.8750000÷00	.0000000	. ᲘᲘᲘᲘᲘ	•3929129÷05
<b>.</b> 87500∩0∻00	.1C000C0-01	·1000000+03	.3824237÷05
•8750000 <del>+</del> 00	.2500000-01	•4000 <u>0</u> 000+02	.3681694+05
.875CCCC+00	.5000C00-01	·2000000+02	.3475545+G5
.8750000÷0C	.8000000-01	•1250000÷02	e3267254+C5
•8750000+00	•10000c0+00	.1000000+02	.3146436+C5
.875000C+00	•2000000+n0	.5000000401	•2683690∻05
.87500nc+0c	<b>.</b> 4000000+00	.2500000+01	.2122778+05
<b>.</b> 8759000400	•6000000 <del>+</del> 00	•1666667÷01	.1778777+05
•875000C+0C	•8002000+00	•1250000+01	.1539860+05
•8750 <b>0</b> 00+00	·1000000+01	•10000000÷01	.1361909+05

TWO STAGES - BOTH EXPENDABLE

ISP= 460.0

LAPBCA	WPL/WS	WS/WPL	DELTAV
.875000C+0C	•2000000+01	<b>"</b> '50000000∻00	·87572C5÷04
.875000C±00	·3000000+01	.3333333+00	.6500660±04
.8750000+00	.4C00000+01	.2500000+00	•518CC34+C4
.8750000400	•5C00000÷01	•20000 <u>0</u> 0+00	•4309191404
.8750000∻00	.8000000+01	•1250000÷00	.2868933+04
.8750000∻00	•1000C00÷02	•10000000÷00	•2347282+04
* <b>3</b> 00000000+00	~6COOJOO	• 0000000	•4292643+05
_ <b>+</b> 900000+0C	•1000100-01	•1000000÷03	•4160298+05
.9^00000C+0C	•25000C0-01	.4000000+02	•3984C60+05
• 90000000	•5C00C00-01	•2000110+02	•3735518+C5
•9000000+00	-8699960-01	•1259090+02	.3490762+05
<b>,</b> 90000000+00	•1000000+00	.1000000÷02	•3351273+05
.9000000+0C	.2000000+00	•5000000+01	•2839345+95
•9000000 <del>+</del> 00	•4000000÷00	.2500000+01	•2219451+05
•9000000÷1C	.6000000+00	.1666667+01	.1852319+05
•99000000+00	•8600000+00	•125000Q÷01	•1599758+05
° 3000 û 00+0 û	.1000000+01	.1000720÷01	•1412684÷05
* 300000£0÷0¢	.2000000*01	,•5000n0n+00	•9051232 <b>+</b> 04
.9000003+0C	.3CC0000+01	.3333333+00	•67095C7+04
.9000000+00	.4000000+01	.2500009+00	•5342376÷94
•მით₫₫იე∻ი¢	•5000C00+01	•20000000∻00	•4442095+04
•9100000÷00	•8000100÷01	.1250000+00	.2955146÷04
.9000000e+00	•1000000+02	•1000000400	<b>.</b> 2417166 <b>∻</b> 04
•9250000+00	.0000000	• 0000000	<b>.4752439+</b> 05
.9250000+00	.1000000-01 .	•10000 <del>10</del> +03	•4575601+05
.9250000+0C	.2500000-01	.4000000÷92	•4347573÷05
。925000C+0C	•500000 <del>-</del> 01	• 2000000+02	<ul><li>4037884÷05</li></ul>
<b>`.</b> 9250000∻00	.8CC00C0-01	•1250000+02	.3743763+05
.92500 <u>0</u> 0400	.1000000+00	·1000000+02	•358CC59+C5
•9250000÷00	•2010100÷00	•5000000¢01	•2987862 <b>+</b> 05
•925/10/04/00	.4CC0000÷00	.2500000+01	.2320240+05

#### TWO STAGES - BOTH EXPENDABLE

#### ISP= 460.0

LAMBCA	WPL/WS	HS/WPL	DELTAV
.925000C+0C	-6CC00000+00	.1666667+01	•1928970÷05
√9250000+0C	•.8C3QCC0+00	•1250000+01	•1661054÷C5
• 9250000+00	·1000000+01	•1007707+01	•1464433÷05
•925000C÷00	.2000000+01	•5000000+00	•9348319+04
•925 CCCO+00	.3000000+01	•333333400	.6919866+04
.92500n0÷00	.400000+01	•2500000+00	•5505624+04
•9250QQQ+QQ	•5000000÷01	•2000000÷00	•4575603+04
•9250°C0C+0C	.8000000÷01	•1250000+00	.3041611+04
•925 <b>0</b> 000+00	.1000000+02	•1000000+00	•2487216÷04
•9500000 <del>+</del> 00	•000000	• 0000000	•5387355+05
•95000000+00	.1000000-01	•1000000+03	•5125598 <b>+</b> 95
•9500000+00	.2500000-01	•400000c÷02	•48C7369÷05
<b>.</b> 9500000400	•5000000-01	•2000000+02	.4401398+05
•9500000÷00	.80000CC-01	.1250000+02	•4036469+05
•95000000+00	.1000000+00	•1000000÷02	•3840032÷05
•9500000+00	•2C000C0+00	•5000000+01	.3158229+05
<b>。</b> \$500070÷00	.4000000+00	•2500000+01	•2425560+05
•95/00000+00	-600000+00	.1666667+01	•2006182*05
•95000000+00	.8000000+00	•1250000+01	•1723821÷05
<b>.</b> 95000000+00	. <b>-1</b> 000000+01	.100000C+01	<b>.</b> 1517158∻05
.9500000÷0¢	•20000C0÷C1	•500 <u>0</u> 000+00	•9648534+04
•95000000+00	·.3000000+01	<ul><li>3333333+00</li></ul>	•7131762+94
.9510000c+00	•4000000÷01	<pre>2500000+00</pre>	•566 5789 +04
•9500000000	.5000000÷01	·2000000+00	•4709721+04
•9590000+00	<b>.</b> 8000000001	.1250000+00	•3128330÷04
•9590009÷0¢	·1000000+02	·1000000+00	·2557433+C4

TWO STAGES - BOTH REUSABLE---SLINGSHCT\*\* \*PAYLOAD DELIVERY

ISP= 460.0

LAMBCA	WPL/WS	WS/WPL	DELTAV
\$0°0000°0	<b>0000000</b>	.0000000	•1506234+05
.80^00000+00	.1000000-01	.1000000+03	·1498693+05
<b>`</b> 8000000 <del>1</del> 00	.2500000-01	•40000000+02	•1487467÷C5
•800QQQQ+00	•50000C0-01	.20n1nn0+n2	·1468990+C5
.8000000+00	.8000000-01	·1250000+02	•1447201+05
•8000000¢0C	•10000C0+00	.1000000+02	•14329C8÷05
.80000000400	.20000CO+00	•5000000÷01	•1364246÷05
•80000000+0C	<b>.</b> 4000000+00	.2500000+01	•1240573÷C5
•8000000÷00	•600000÷00	.1666667+01	•1133728+05
<b>%</b> 80000000000	.80000C0÷00	•1250000÷01	•1041568÷C5
.80000000+00	·1000000+01	.1000101+01	•9618774÷04
•8000C00 <del>+</del> 00	•2000000÷01	<b>.</b> 5000000+00	•6901206+04
.80000000+00	.3000000+01	.3333334¢0	•5358283∻04
.*80000000+00	.4C00000+01	•2500000÷00	•4374315+04
•800 <u>0</u> 00+00	•500000+01	•2001000÷00	•36942C6+C4
•8000000+0 <i>0</i>	<b>.</b> 8000000∻01	•1250000 <b>÷</b> 00	·2517700÷04
00+0000018.	•1000000÷02	•100 <u>00000+0</u> 0	.2076458+04
.825000C+0C	• 0000000	-0000000-	1623187±05
.8250 <u>0</u> 00+0C	.1000000-01	•1007000+03	•1614758÷95
.825000C+0C	<ul><li>2500000-01</li></ul>	<b>.</b> 4000000∻02	•1602212+05
.8250000÷00	.5000090-01	•2 <u>0000000</u> 02	•1581559÷05
.825000C+0C	.8000000-01	•1250000÷02	.15572C7 <c5< td=""></c5<>
.82500001±00	.1000000+00	.1000000÷02	•1541235+05
<b>.</b> 8259000+00	•20000c0÷00	<b>.</b> 5000000+01	1464541+05
.8250000÷00	•40000CO+0O	.2507000÷C1	•1326733+05
.8250000*0C	•6000000+00	.1666667+01	·1208239+05
.8250000+00	.8000000+00	•1250 <u>000</u> 00	•1106587*05
.8250C0C+0C	•1000000+01	.10000000	.1019169+05
.825000C+00	•2000000÷01	•5000000+0 <u>0</u>	•7247185÷04
.8250CCC+9C	.3010000+01	.3333333+00	•560°563÷04
:8250000÷0C	.4000000÷01	.2500000+00	•4559294+04

THO STAGES - BCTH REUSABLE---SLINGSHOT\*\*\*PAYLOAD DELIVERY

ISP= 460.0

-L-AMBCA	WPL/WS	WS/WPL	DELTAV
.º8250000±00	.5CCOCCO+01	.2000000+00	.3843309+04
.825000C+00	.8C00000+01	.1250000+00	.2611403+04
•825000@∻nn	•1000000÷02	•1000000+00	.2151415+04
<u>.850000€00</u>	•000000	• 0000000	.1756657+05
<b>.</b> 8500000+00	.1000000-01	•1000000÷03	.1747139+05
•85 <u>^0</u> 0009÷00	-2500ACO-A1	•4000000 <del>0</del> 02	*1732971+05
<b>,</b> 85000003+00	•50000c0-01	•2000000÷02	.1709649+05
<b>.</b> 8500000+00	.8000000-01	.1250000+02	·1682150+05
<b>.</b> 8500000+0 <i>0</i>	.1000000÷00	•1000000+02	•1664117+05
<b>.</b> 85/10000+00	•20 <u>0</u> 0000+00	*5000000+01	•1577588÷05
•8500C00+00	.4000000+00	.2500000+01	.1422601+05
<b>.</b> -8500000±00	.600000+00	.1666667+N1	.1290148+05
<b>√</b> 85000000+0€	~8CC0CC0+00	.1250000+01	.1177302+05
•8500000 <del>+</del> 00	.1₽00000÷01	.1000000+01	.1080911÷05
. <b>.</b> 8500000+00	•2000000+01	•5000000+00	.7609476+04
•850 <u>0</u> 000+00	•3C00000+01	.3333333+00	•585C819 *04
•8570C00+0C	•4000000+01	•2500000÷00	•4748912+94
<b>.</b> 8500000+00	•5C000C0+01	•2000000+00	<b>.</b> 3995423÷04
.8500000÷00	.8CC9000÷01	•1257000÷00	.2706293404
•85^0C^ <u>0</u> +0C	•10000C0÷02	•1000000+00	•2227132 <del></del>
<b>.</b> 8750@00÷0@	<b>.</b> 0000000	. 0000000	.1912436÷05
•8750000÷0Q	-1000000-01	•1000000+03	.1901534+05
.8750C0C+0C	<pre>•2500000-01</pre>	.4000000±02	•1885303÷05
<b>.</b> 8750000+00	•5C00000-01	•2000000+02	.1858587+05
<b>.87</b> 5000€00	.8CGOCCO-G1	.1250000∻02	.1827090÷C5
•8750000÷00	.10000000+00	•1000000+02	.1806439÷C5
•8750CCC+00	•2CDOJJJA+00	•50000000+01	.1707449÷05
.8751010401	<b>.</b> 4000000+00	.2500000+01	.1530917+05
•875 CCC C+0 C	<b>.</b> 6000000+00	.1666667+01	.1381284+95
•8750 <u>00</u> 0+00	•8¢¢3¢30+00	.1259000+01	•1254947¢05
	•1000000+01	.1000000401	.1147949+05

TWO STAGES - BCTF REUSABLE---SLINGSHCT\*\*\*PAYLOAD CELIVERY

ISP= 460.0

LAMBDA	WPL/WS	WS/HPL	DELTAV
.8750000÷00	.2000000+01	•59000000+00	•7989899÷04
875000CC+9C	.3000000÷01	.3333333+00	.6109661+04
.875000C+0C	.4CGOCCC+01	•2500000+00	•4943436÷04
<b>-</b> 8750000+00	.5^^000CO+01	•2000000+00	.4150684+04
•8750000 <del>+</del> 00	.8000000+01	•1250990+nn	.2802402÷r4
.8750C^C+^0	.1000000÷02	•1000n00+no	.2303624+04
.90000000¢00	•cccooco	•0000000	.2100149+05
<b>.</b> 90000000+0C	•1000000 <del>-</del> 01	.1000000+03	.2087396+05
• 90000000+0C	.25000C0-01	•4000000+02	.2068409+05
• 30000000400	.5CG0CCO-01	•2000000+02	.2037155+05
• 900000000+000	<b>.</b> 800000-01	•1250000÷02	<pre>.2000317+05</pre>
•9000000+00	.1C0000C+C0	•1000000+02	<b>.</b> 1976173+05
<b>.</b> 900000000000	•2000c00÷00	•5000000+01	•1860615÷05
•9000000+00	•4 <b>CO</b> OOOO÷00	•2500000÷01	<b>.</b> 1655856+05
• 3000000000+00	.6000000+00	.1666667+01	•1484309+05
•9n00000+00	-8C00000+00	•1250000÷01	•1341236÷05
.9000000400	.1G0000C+01	.10000000+01	·1221419÷05
• 30000000+00	.2000000+01	•5000000+òn	.8390618+04
• 9010C00+0q	.3C90000+01	.3333333+00	.6377774+04
• 90000CCC+0C	.4000000÷01	•2500000÷00	•5143156+04
*80000000000	.5000000÷01	• 2000010+00	•4309240±04
•90000000000	.8000000+01	•125Q000+0A	•2899767+04
•90000000+0r	•1000000÷02	.1000000+00	·238051C+04
•925000C+0C	.000000	• 0000000	.2337689÷05
•925000C+0C	.10000co-01	•1000000÷03	.2322264∻95
.925000C+00	·2500000 <del>-</del> 01	•4000@30+02	•2299298÷95
.9250000+0C	.5C000CC-01	<b>.</b> 2000000402	•2261498+05
.925101C+110	.8C00000-01	•1250000+02	·2216961÷05
.925000C+00	.1000000+00	<b>-1000000+02</b>	.2187790÷C5
•925000C+AC	.2000000÷00	.5000000+01	.2048528∻05
•925000C+0C	.4C00000+00	.2500000+01	.1804310+05

TWO STAGES - BETH REUSABLE---SLINGSHOT\*\*\*PAYLOAD DELIVERY

ISP= 460.0

-L-AMBEA	WPL/WS	WS/WPL	CELTAV
<b>3</b> 9250000+10	.6000000+00	.1666667+01	•1603333+05
.9250000+00	.8000000+00	•1250990+91	.1438675*^5
•925000C+00	.1rn00co+o1	.10000000÷01	·1302898+^5
- <b>.</b> 925000C+0C	.2011000+01	•50000000÷00	.8814243+04
•925000C+AC	•3000000+01	.3333333+00	•6655934 <del>+</del> 04
.925000C+0C	.4000000+01	.2500000+00	•5348393+04
•9250000*00	<b>-</b> 5€00€00+01	.2000000+00	•4471253404
•9250000+00	<b>.</b> 8C090C0∻01	•125A000+00	·2998423+04
•925000C+0C	•10000C0+02	•1000000÷00	·2459009+04
•95000000+00	•000000	•0000000	•2664920 <del>*</del> 05
•9500000±00	.1000000-01	•1000000+03	•2645087+05
•95000000+00	.2500000-01	•4000000÷02	.2615558+05
•9500000+00	.5000000-01	.2000000+02	•2566968 <b>∻</b> 05
.9500000+0C	.8000000-01	•1250000÷02	<b>.</b> 2505770∻05
<b>-</b> ,95000000+00	.10000CC+00	•1000000+02	.2472355+C5
.950000¢±0Ç	<b>.</b> 2000001+00	.5007700÷01	.2294655∜೧5
•9500900+00	•4000001400	.25090000+01	·1989053÷05
•9500000+00	.6090000+00	.1666667+01	.1745283÷05
•9500000+00	•8000000÷00	·1250000+01	•1551156÷ <sup>1</sup> 5
•95000001+00	.1000000+01	•1000000÷01	•1394683 <del></del> ¢05
<b>.</b> 9500000400	.2000000÷01	•50000000+00	•9263964+04
•9500000+00	•3000000∻01	.3333333+00	•6945028*04
.950 <u>0</u> 000+00	<b>~</b> 4000000+01	•250209C+0 <u>0</u>	•5559497 <i>\$</i> 04
.9500000÷00	.5000000÷01	<b>.</b> 20000000∻00	•4636892+04
•9500000÷00	.8¢090000÷01	.1250000+00	•3098410÷?4
•9500000+9C	.1000CC0+02	•10000000+00	.2537938+04

TWO STAGES - BOTH REUSABLE---SLINGSHOT\*\*\*PAYLOAD RETRIEVAL

ISP= 460.0

LAMBDA.	WFL/WS	WS/WPL	DELTAV
00+00000008.	.0000000	,•0000000	.1506234+05
9666600406	<b>-1000000-01</b>	·1000000+03	.1483179+05
.8000000±00	•25000C0-01	.4000000+02	.1450591+05
<b>.</b> 8003000+00	<b>.</b> 5000000-01	•2000000+02	•14CC895÷05
<sup>*</sup> 8∿∪∿C∪Ů∻∪U	•8000000 <del>-</del> 01	•1250990÷02	•1347602±05
.8010000000	•1000000÷00	.1000000÷02	.1315276+05
•80000000400	.2CCOCCO+00	•5000000+A1	•1181908÷05
•8000C00+0C	•40000C0+00	.2500000+01	•9998842÷94
.80100000+00	•6000000+00	.1666667+01	•8767901÷04
•840300040C	•8000000+00	•1250000+01	.7857110+04
•8/0/00/0+0/	.1000GC0+01	•10000000÷01	•7145783÷04
<b>180000000+00</b>	.2000CC0+01	•5000000+00	•5028224÷04
•8000000±0C	•3C000C0∻01	.3333333+00	•3932292+04
•8C000000÷00	.4C00000+01	•2509900+00	<b>.</b> 3245104+04
•80J0¢0¢÷0C	.5000000÷01	•2000000+00	•2769032+04
•8000000÷00	.8000000+01	·1250100÷00	.1932436+94
•8000000÷00	•10000C0÷02	•1000000+00	•1611296+04
•82500000÷0C	•000000	• 000000	<b>.</b> 1623187∻05
.8250C0C+0C	.1cooooc-o1	•1000000÷03	•1595800±05
.8250C∩ <b>C</b> ∻0 <b>C</b>	+2500000 <del>-</del> 01	•400010C+JŽ	.1557395+05
.825CCCC+00	.5000000-01	•5000000÷05	•1499466+05
•8250000400	*8CC00CO-01	•1250000÷02	.1438119+05
.8250000+00	.1coooco÷oo	•1000000÷02	•1401260+05
•8250000+00	.2000000+00	·•50000000+01	•1251597 <b></b> •05
<b>~</b> 825000¢¢40¢	<b>.</b> 4000000+00	•2509 <u>130</u> ÷01	•1052257÷05
<b>.</b> 8250000+00	<b>.</b> 6000000+00	.1666667+01	•9198267+04
.8250C∩C <b></b> 40C	•8000000÷00	•1257700+01	.8227687+04
•8250000+00	.1C0000C+01	•1001100+01	•7474118+04
•8250000÷00	.2000000÷01	•5000000+00	.5247982*C4
78250000+00	•30000CC+01	•3333333+00	•4102722+04
•825ขัดขัด+กูด	.4C00000+01	· 2500000+00	.3385947+04

TWO STAGES - BOTH REUSABLE---SLINGSHOT\*\*\*PAYLOAD RETRIEVAL ISP= 460.0

LAMBCA	WPL/WS	WS/WPL	DELTAV
•8250000÷00	.5000000+01	.2000000+00	-2889712+94
•8250000+00	.8000C0C+01	.1250000+00	·2017838÷04
\$25000C+00	.1000000+02	.1007000+00	.1683057+04
.8500C00+00	.0000000	•0020200	•1756657+05
.8500000+00	.1000000-01	.100100C+03	.1723474+05
.85700000+00	.2500000-01	<b>.</b> 4000000+02	.1677426+05
<b>.</b> 8500000+00	.5000009-01	* <u>+2000000+02</u>	•1608938+05
.8500CCC+0C	.8000000-01	.1250000+02	•1537538+C5
.850000C+00	.1000000+00	•1000000+02	.1495136+05
•8500000±0G	<b>.</b> 200000+00	.5000000+01	•1326186+05
.8500000000	<b>.</b> 4000000+00	.2500000+01	•1107342+05
.8500CCC+0C	<b>.</b> 6000100+00	.1666567+01	•9647684+04
<b>.</b> 85000000÷00	.8CC00CO÷00	.1259099+01	•8613342÷04
<b>.</b> 8500000+00	.10000c0÷01	.1000200∻01	.7815218+04
•8500C0C+00	<b>.</b> 2000000+01	<b>.</b> 5001000∻00	<b>.</b> 5476040∻04
<b>.</b> 8500000÷00	.30C0C00+01	.3333333+00	•4279868+94
•8500nn0+n0	%4000000+01	.2500000+00	•3532588÷04
•850000C+nc	.5000000÷01	.2000000+n0	.3015547+04
<b>.</b> 85∩∩∩∩∩∻∩ŋ	<b>.</b> 8¢cn909+01	•1257 <u>0</u> 70+07	<b>-</b> 2107182÷04
.8590000±0C	.1000000402	.1009000+00	°1758245+04
.87500000+10	.0000000	•0002000	•1912436*05
· •8750000+00	.100000-01	.1000COO+03	.1871131+05
.875000C+0C	.2500000-01	<b>.</b> 4000000+02	.1814623+95
•8750000+0C	•5000000-01	- 2000000+02	•1732135÷05
<b>.</b> 8750000∻00	.8000000-01	•1250000+02	.1647859÷05
•875000C+DC	.10000C0+00	.1000100÷02	•1598536÷C5
<b>.</b> 8750000+0C	.2000000+00	•5000000+01	•1406423÷05
•875000C+00	<b>.</b> 4¢0∩0€0÷00	.2500000+01	•1165460+05
.8750000÷1C	<sub>*</sub> 6000000+00	•1666667+01	.1011831+05
•87500C0+0g	.8000000±00	.1250000+01	•9015834+04
•8750000+0¢	.1000000+01	.1000000401	·817C644+04

# TWO STAGES - BCTH REUSABLE---SLINGSHCT\*\*\*\*PAYLOAD RETRIEVAL ISP= 460.0

LAMBEA	WFL/WS	WS/WPL	DELTAV
.8750000+00	-2000000+01	•5000000+00	.5713610+04
.8750000400	•3C000C0+01	.3333333+00	.4464791+94
.875000C+0C	.4CCO100±01	.2500000+00	.3685979+04
.8750000400	•5000000+01	.• 20C1100÷C0	.3147404+04
.8750000÷00	.8C00000÷01	•1250000+00	.2201156+04
.8750000¢00	.10000c0÷02	.1000-000+00	.1837465+C4
.9000000000	•000000	• 0000000	•21nn149÷05
.50000000+0C	.1000000-01	•1007000+73	•2046690+05
•9000000+0C	<pre>.2500000-01</pre>	<u>.400</u> 0000+92	•1975053+05
.9000000+00	•5C000C0-01	<b>+200</b> 9999+02	.1873169+05
* <b>3</b> 000 00 0 40 0	•8C00000 <del>-</del> 01	•1250000+02	•1771855+C5
9000000000	.1009960+90	•1000 <i>0</i> 00+02	.1713669+05
.9000000+00	.20000c0+00	•5007090÷01	.1493250+05
~900 <u>0</u> CrC+0C	•4CG30C0+00	.25000C0÷01	:1226998+35
•90000000	•600000+00	.1666667+01	•1061279÷05
"ეტიტიტი <del>ა</del> ტეტ	<b>.</b> 8¢ <u>0</u> 000c÷00	•1250000+01	•9437349+04
.9000000+00	•1090CCO+01	•1000000+01	.8542359*04
~9000000 <del>+</del> 00	•2000000÷01	•5000000÷00	•5962245÷04
.9000000000	.3000000+01	•3333333+00	.4658853 <u></u> ÷04
• 90000000+00	.4CC0000+01	• 25000000+00	•3847347÷04
- <b>.</b> 90000000+00	.5C00CC0+01	•20010 <u>9</u> 0+90	.3286404+04
.90000000000	<b>.</b> 8000000+01	•1250000÷00	•2300653÷04
•9000000¢0C	.1000000+02	•1000000÷00	•1921504+04
•9250000±00	.000000	÷ 0000000	.2337689÷C5
.9250000+0C	.1000000-01	•1000000÷03	.2264167+05
•9250000÷00	•25000CO-01	•4000000÷02	.2168819+05
.9250C0C+0C	•5C000C0-01	<b>~</b> 2000000+02	•2038388+C5
•92500^C+0C	.8000000-01	•1250000+02	<ul><li>1913533+05</li></ul>
.9250000400	.10000C0+00	•10C00000+02.	.1843617+05
•9250000+00	•2000000+00	•5000000+01	•1587863+05
.9250000÷0C	•4C000C0+00	•2500000÷01	•1292435+05

TWO STAGES - BOTH REUSABLE---SLINGSHOT\*\*\*PAYLOAD RETRIEVAL ISP= 460.0

LAMBCA	WPL/WS	WS/WPL	DELTAV
.9250000+0C	.6000000+00	.1666667+01	·1113443÷05
•9250000+0C	•8000000÷nn	.1250000+01	.\$88C68^+74
•925000C+00	.1000000+0I	.10000000+01	<b>.</b> 8932897 <b>*</b> 04
.9250000+00	.2000000+01	<b>.</b> 5000000+00	•6223986÷04
<b>.</b> 92500000+00	.3000000+01	.333333400	.4863856+94
.9250000÷00	.4000000+01	<b>.</b> 2599000⊹00	.4018318+04
•925000C+0C	.5000000+01	•2000000+00	.3434029∻04
•9250000÷0C	.800000÷01	1250000+00	.2406854+C4
•9250000+00	.1C000C0+02	<b>.</b> 1000000+00	.2011406+C4
•\$500000+0C	•0000000	•000000	.2664920+05
•9500000+00	.1000000-01	£10000000+03	.2552320±05
.9500000 <del>0</del> 00	.2500000-01	<b>.</b> 4000000+02	.2414772+05
•9500CCC+0C	.5000CCG-01	.2000000+02	.2238381+05
•9500000+0C	.8CC0000-01	.1250000÷02	.2079005÷05
.9500000c+0C	<b>.</b> 1¢¢00000+00	<b>.</b> 1000000+02	.1992888+05
.95000n0+0C	.2000000+00	+5000000+0 <u>1</u>	.1691824+05
.950000¢+0¢	.40000co+oo	.2500000+01	.1362378+05
•9500CC0+2C	.600000+00	.1666667+01	.1168753∻05
•9500000c+0C	.8000000000	.1250000+01	.1034951+05
° 9 2 0 0 0 0 0 + 0 C	.1000000+01	.1000000+01	÷9345637÷04
.9500000÷0C	.2000000+01	.5000000+00	.6501604+04
•9599000+00	•3000000÷01	•3333333+00	.5082252+04
<b>"</b> 95090000+00	.4000000+01	•2500000÷00	.4201105+04
•950000C+0C	.5¢00000÷01	.2000000400	.35923C7+04
. •9500000¢nc	<b>.</b> 8¢¢00000+01	•1250000+00	<b>₀</b> 2521383 <b>÷</b> 04
•95000000+00	.1C000C0+02	.1000000÷00	.2108692+94

TWO STAGES - BCTH RELSABLE---SLINGSHOT \*\*\* RCUNDTRIP

ISP = 460.0

LAMECA	WPL/WS	WS/WPL	DELTAV
.82000000+0¢	.0000000	.000000	•1506234+05
.8^0,0000+0¢°	·1000000-01	•1000000÷93	.1475908+05
•8/110000€0C	<pre>-2500000-01</pre>	.4000000c+02	.1433414+05
800000040€	•5000C00-01	.20000000+02	.1369436+05
.80000000+00	•800000n-01	•1250970÷02·	.1301924+05
.80000000+00	-1000000+00	.100 <u>0</u> 000+02	·1261519+05
.8100000+00	•2000000+00	•5007000 <del>+</del> 01	.1099146+05
•8000000¢00 <u></u>	•4600000+00	.2500000+01	8887947+04
•80000000+00	<b>.</b> 6001001+01	.1666667+01	.7540382+04
*8∂∪00û0û\$UC	-8C000C0+00	• <b>1</b> 259000+01	.6583293+C4
•8000000+00	•1(000cn+n1	•1000000+01	<b>.</b> 5860103∻04
•8799¢¢¢+ <u>9</u> ¢	.20C00CG÷01	•5000000÷00	.3839839+04
•8000000¢00	•3000000÷01	•3333333400	.2878213+04
.8010C1C+0C	.4000000÷01	•2500000÷00	.2307354+04
•8000000e0C	•50700000÷01	•2000000÷00	·1927362+04
<b>-</b> 8300000+00	<b>.</b> 8000000+01	•1259000÷00	•1292244+74
•80000000+00	.1000000+02	•100 <u>0000</u> +00	•1060054±04
•8250000 <del>+</del> 00	°CC000CC	• 0000000	.1623187+05
•8250000+0C ·	.1000000-01	•1000000÷03	<b>.</b> 1587704+05
•8250000+00	<b>-2500000-01</b>	•4000000+02	<b>.</b> 1538367 <b>+</b> 05
.825000C+0C	<b>.</b> 5000000−01	.20000000÷02	•1464862±05
•825000C∻∩0	•8000000-01	•12500000±02	•13882C5÷05
•8250000÷00	•10000ro+oo	.1000000÷02	.1342729+05
·8250C00+00	.2000000+00	<b>.</b> ∙5000000+01	•1162565÷05
.8250000+0C	.4CC0000+00	•2509000 <b>∻</b> 01	.9340070+04
.8250000÷00,	•600000+00	•1666667+01	•7896998+04
.825990C+0C	.8000000+00	.1250000+01	•6879721÷04
.8250000∻00	·1000000+01	·1000000+01	•6114578+94
•8259000÷00	•2¢¢0000401	<b>.</b> 5000300∻00	.3990510+C4
•8250000÷00	.3000000+C1	•3333333+00	•2985553 <b>∻</b> C4
.8250000+0C	.4000000+01	•2500000+00	•239 <u>0715+04</u>

# TWC STAGES - BCTH RELSABLE---SLINGSHOT\*\*\*RCUNDTRIP ISP= 460.0

LAMECA	WPL/WS	WS/WPL	CELTAV
.825000C+0C	.5CCOCCO+01	.2000000+00	.1995487÷04
.825000C+0C	.8000000401	•1250000÷00	.1336209+04
.8250000÷00	.10000CO÷02	.1007000+00	·1095594+04
.8500000+00	.000000	• 0000000	•1756657+05
<b>.</b> 85000000€00	.1000000-01	.1000000+03	.1714379+05
.850000040C	.25000C0-01	•40000000+02	•1656187÷05
.8500000400	.5<00C00-01	.2000000+02	<b>.157</b> 0650∻05
•8500000÷0C	.8CC00CC-01	<pre>.1250000+02</pre>	.1482753÷05
•8500000 <del>+</del> 00	.10000¢¢+00	.1000000÷02	.1431168+05
.8500¢00÷00	<b>~20000C0+00</b>	•5000000÷01	•1230228+05
.85000000+00	•4000000+00	.2500000+01	.9813523+04
.8500C00+0C	•69000C0+00	.1666667+01	•8267113+04
.8500000+00	.8000000+00	.1250000+01	<b>.</b> 7185694+04
•8500000¢0C	•10000C0+01	.1000000401	•6376247+04
.8500C00+0C	*2000000+01	.5000000÷00	.4143902+C4
•8500Q00±0Q	.3000000+01	.3333333+00	.3094325+04
.85∩0000÷0£	.4C000000÷01	•250 <u>^</u> 200+00	.2474964+04
.8500000+0C	.50000C0+01	•2000000÷00	·2064209÷04
.85000CC+0C	<pre>*8000000+01</pre>	.1250000+00	·1380423÷04
•8500000+00	·1000000+02	•1007700*00	.1131305÷04
•8750000 <del>+</del> 00	•0000000	•0000000	.1912436÷C5
•8750000¢00	.1C00CC0-01	•1000000÷03	•1860784÷95
.8750000÷00	•25000C0 <del>,</del> 01	<b>.</b> 4001000∻02	.1790672+95
.875000C+00	<b>~5</b> 00000-01	<b>~</b> 2000000+02	.1689445+05
.8750000+0C	.80000c0-01	•1250000÷02	<b>.</b> 1587387+05
.8750000¢n0	.100000±00	.1000000+02	•1528298+05
.8750C0C+00	.2C000C0+00	.5000000+01	.13C2758+C5
.8750000÷00	.4000000÷00	.2500000+01	.1031951+95
.875000C+QQ	•6¢₫00¢0¢0¢	.1666667+01	<b>.</b> 8651889∻74
.875CCC0+0C	.8C030C0+0Q	.1250000+01	•7501932±04
•8759000÷00	.1000000+01	.1000000÷01	•6645598+04

### TWO STAGES - BCTH RELSABLE---SLINGSHOT \*= \* RCUNDTRIP

ISP= 460.0

LAMBCA	WPL/WS	WS/WPL	DELTAV
.8750000÷00	.2000CCC+01	•5002090400	. 4300137+04
.875000C+00	•30000c0÷01	<b>₽3333333</b> +00	•3204580±94
.875COOC+OC	.4900000+01	•2500n00+00	•2560113÷04
.8750000÷0C	•50C0C00401	<u>.</u> 2000000+00	.2133544∻04
.8750000¢00	.8C07000+01	•125 <b>0000</b> +00	•1424896÷04
.875C0CC+00	.1000000+n2	•1007070÷00	•1167184÷04
•9000000+00	•000000	• 0000000	.2100149+05
<b>~900000040¢</b>	<b>.</b> 1000000-01	•1000000÷03	•2034709÷05
.90000000	.25000C0-01	•400 <u>0000</u> +02	•1947656 +C5
.9000000+00	.5C00CCC-01	. •2000000+02	•1825082÷05
•9000000+00	.800000-01	•1250000+02	•17C4618+C5
.9000000000	.1CCOOCO+OO	•1000000÷02	•1636780+95
•9000000+00	*5000000000	•5000010÷01	<ul><li>1380926+05</li></ul>
• 90000000%00	.4000000+00	.2500000+01	•1083363+05
•90000000÷0C	.6000000 <b>∻</b> ∩0	.1666667401	•9052657+04
• 80000000+00	•8º000000+0º	•125∩000+01	•7829258÷04
•9010000+0 <i>C</i>	.100000C+01	.10000000+01	.6923184÷04
9100000+00	.2C00000÷01	•5000000÷n0	<b>.</b> 4459356+04
• 6050000+00	.3000000+01	.3333333+00	•3316373+04
.900000000	.400000+01	1.2500000+00	•2646199+04
•90000000±00	<b>.</b> 5000000+01	•200000C+Q0	.2203591+04
• ᲛᲘᲡᲣԸᲘᲘ+ᲔᲘ	., 8CCOCCO+01	•1250900÷09	•1469631÷04
.9000000+00	<pre>.1000000+02</pre>	•1000000+00	.1203232+04
•9250CCC+0C	.000000	•0000000	.2337689+05
•9250000400	.10000C0-C1	<b>.</b> 1000000+03	•2249908÷05
•9250000+0C	.25000C0-01	•4000000+02	.2136823+05
•925000C+0C	.5000000-01	•20000000÷02	.1983453+05
•9250000+00	.8000000-01	•1250000±02	.1838050+05
•9250000+00	.1000000+00	.1000000+02	.1757241+05
_ <b>-</b> 9250000+00	2000000+00	.5000000+01	•14657C7÷05
•9250000+00	•4007000+00	.2500000+01	•1138595+05

### THO STAGES - BETH RELSABLE---SLINGSHOT\*\*\*RCUNDTRIP ISP= 460.0

LAMBDA	WPL/WS	WS/WPL	DELTAV
.9250000+00	•6000000+00	.1666667+01	.9470961+04
<i>√</i> 9250000÷00	•800000000	.1250000+01	.8168601∻04
.9250000+0C	•1000000±01	.1000100+01	<b>.7</b> 209628∻04
<b>.</b> 9250000+00	.2CC00C0+01	•5000000±00	•4621712±04
• 9250000+00	.3000000+01	.3333333+00	•3429761+04
•9250C0C+0C	.4CCOQCO+OI	•2500000÷00	•2733246+04
•9250000÷00	•5000000+01	.20000000+00	•2274099÷04
•925000C+00	.8000000+01	•1250000+00	•1514632+04
.92500000+00	•1000000÷02	•1000000+00	•1239455÷04
•950 <u>0</u> 000+00	•000000	• 1000000	•2664920÷05
•95000C0*00	.1000000-01	. •1000000+03	•2534542÷95
•95000n0+00	.2500000-01	•40000000+02	.2376155+05
•9500000+00	.5000000-01	.2000000+02	.2174321+05
.9500000+00	.8000000-01	•1250000+02	•1993146∻∩5
•9500000+00	.10000cc+00	•1009090+02	•1895737+05
.9500000400	.200000+00	.5000n00+∩1	•1558354÷∩5
.9500000+00	.4C09900÷00	•2500000+01	•1197114+05
<b>.</b> 95/10000+110	•6000000+00	.1666667+01	•9908608 <del>*</del> 04
.9500000¢0C	•8000001+01	•1250000+01	.8521042÷04
•9500000+00	•1000000÷01	•1000000+01	<b>.75</b> 05639+04
•9500000±00	.2000000+01	•5000000÷00	.4787366+04
•9500000+00	.3C00010+11	•3333333+00	.3544806+04
.9500000+00	•4000000+01	·2500000+00	·2821284÷04
•9500000+00	•50C0000+01	<b>∵.</b> 2000000÷00	•2345353÷04
•9500000+00	•8CC10011+01	·1250000+00	.1559904+04
•9500000÷00	.1000000+02	•1000000÷00	.1275850+04

TWO STAGES - BOTH REUSABLE---TRAPEZE\*\*\*\*\*PAYLOAD DELIVERY ISP= 460.0

LAMBÇA	WPL/WS	WS/WPL	DELTAV
.80000000+00	•cccooce	.0000000	.1740385+05
•8000000400	.1000/00-01	.1000000÷03	•1728950+05
.8000000+00	•2500CCO-Cl	•4000000+02	•1712003+05
<b>.</b> 80000000400	.5C00000-01	.2007090+02	·1684299÷05
.80000000	.8C10000-01	.1250000+02	•1651938+C5
•8000000+00	<b>.1</b> 000000+00	.1000000402	•1630893+05
•80000000+00	<b>.</b> 2000900+00	.500000C÷01	·1531789÷05
<b>.</b> 8∩ᲔᲔᲘᲘᲔ+0 Ე	•4000000+00	•2500 <u>00</u> 00+01	•13615N3+N5
<b>.</b> 80000000+00	-6CC00CC+00	<b>.</b> 1666667∻91	•1222416+C5
.8000C00+0C	•8000000+00	•125000C+01	.1107842+05
•8000000+00	.1C000000+01	•1000000÷01	.1012358+05
.80000000+00	.2000000+01	<u>.</u> 5000000+00	•7066406+04
<b>.</b> 8000000400	.3000000+01	.3333333+00	•5430219÷04
. 80000000+00	.4000000÷01	•2500000÷00	•4411645+D4
.80000000400	•5000000÷01	• 2000000+00	•3715 <del>9</del> 56∻04
<b>.</b> 8000000€00	.80C00C0+01	.1250000÷00	•2524193+04
•8300000#00	•1000000÷02	<b>.</b> 1000000+00	<b>.</b> 2080019+04
•8250000 <b>+</b> 00	• ccquaga	.0001000	•1876646+C5
<b>.</b> 8250000+00	.10000C0-G1	<b>.</b> 1000000+03	•1863822+05
.82500r0+00	-2500000-01	<b>.</b> 40000000∻02	.1844816+05
-825000C+0C	•5C00C00-01	•2000000÷02	.1813755∹05
.825 <u>0000</u> 00÷00	.8000000-01	.1250^00+02	.1777487+05
.825000C+0C	•1000000+00	.1000000402	.1753911+05
<b>.</b> 8250000+00	*5ccaaca+au	.5000000+01	•1643951 <del>*</del> 05
<b>.</b> 8250000+00	<b>.</b> 4010000+00	•2500000÷01	•1453464+C5
.8250000÷00	.6¢00000÷00	.1666667+01	·1299755÷05
.8250000¢∩C	•8000QC0+00	•1250 <sup>1</sup> 00+1	.1174049+05
.8250000+0C	•1000000÷01	•10000001+01	•1069954+05
<b>.</b> 8250000+00	.200000+01	<b>.</b> 5000000∻90	•74072C5+04
<b>.</b> 8250000400	<b>~3COOOGO</b> +01	·3333333+nn	•5668929+94
•8250 <u>0</u> 000400	.4000000+01	•2500000÷00	<b>.</b> 4594372+04

TWO STAGES - BOTH REUSABLE---TRAPEZE\*\*\*\*PAYLOAD DELIVERY ISP= 460.0

LAMBCA	WPL/WS	#S/WPL	DELTAV
•8250É00+0C	- •5000000+n1	.2000000+00	•3863598+n4
.8250000+0C	•8000000÷01	.1250000+00	•2617389 <del></del> +74
.ã250coc+oc	•1009990+02	.10000000+00	.2154685+04
<b>.</b> 8500000400	• n copposition • 1 · 1	•0001000	.2031757+05
<b>.</b> 8509609+0¢	•1000000 <del>-</del> 01	•1001000+03	.2017225÷05
•8500000÷00	•25000CC-01	- <b>.</b> 4000000+02	•1995692+N5
<b>.</b> 8503000+00	•5000000 <del>-</del> 01	2000000402	•1960510+45
£85000000+0C	<b>-</b> 8000000−01	.1250000+02	.1919451+05
•85000c0+00	.10000c0+00	•1000000÷32	•1892776÷05
<b>.</b> 85000000+00	•200 <u>0</u> 00+00		.1767575+05
<b>.</b> 8500000+00	.400000000	<b>.</b> 250003 <b>0</b> ∻01	•1554746+G5
•8501000400	•66000000+00	.1666667+01	.1383795+05
<ul><li>85790000+00</li></ul>	00+0000008.	•1250000+01	•1245217+05
•8500000c+0C	<b>.</b> 1000000+01	.100770C÷CI	.1131335+05
•850000c+00	*50000 <u>0</u> 00+01	•5000000+00	.7761683+94
•8500000+00	•3000000+01	.3333333+00	•5914499+04
<b>₽</b> 8500€00+00	<b>-</b> 4000000+01	•2500 <u>000</u> 00	•47812¢3∻94
<b>.</b> 8500000+00	.5000000+Q1 ·	.20074990+99	.4013958+04
.8500C^G+0C	.8000000+01	·1250@@@+00	•2711695+C4
.85000C0∻0C	•1000000+02	.1007000+00	.2230C70+94
*875000C+0C	• 0000000	• 0000000	.2212065+05
•875000¢+nC	.icconcc-oi	.1000010±03	.2195364+65
•875QQQQ+0O	.2507000-01	•4090990 <del>+</del> 02	•2170621+05
.8750000+0C	. •5000000-01	•2000000÷02	.2130207+05
.8750000+0C	.8000000-01	.1250000+02	.2083076+05
.87500C0+00	.1000000+00	.1000000+02	.2052479+05
<b>.</b> 8750000;+00	•2030000+nn	•5000010÷01	•19C9220+05
* .8750000+00	.4CC00CO+0O	.2500000+C1	.1667631¢05
.8750000+00	•6000000+00	.1666667+01	.1475911+05
•875000C+QQ	.8C00000+00	.1250000÷01	•1322213÷05
.875000C+00	.1000000+01	.1007000+01	•1197772÷05

TWO STAGES - BCTH REUSABLE---TRAPEZE\*\*\*\*PAYLCAD DELIVERY
ISP= 460.0

LAMBCA	MAFLM2	WS/WPL	DELTAV
.8750000+0¢	.2000000+01	.50000nn0+00	.8131055+04
.8750000÷00	.3000000401	•3333333÷00	.6167392+04
<u>.</u> 8750000÷00	.40000c0+01	•2500000+00	.4972341+04
.8750000+00°	.500000÷01	•2000000÷00	·4167143+04
.875000Cf0C	.8000000+01	•1250000+00	.2807139404
.875000C÷00	.1cqqqnn÷n2	.10000CC+00	·2306199÷04
.900C00C+CC	•000000	•0000000	•2427969÷05
*30400000400	.1COOCCO-O1	•1000000+03	.2408377+05
.9000000+00	.25000r0-01	•4000000+02	·2379357÷05
<b>~</b> 9000000000	•5000000-01	•2000000+02	.2331982÷05
• 90000000000	.8000000-01	·1251000+12	·2276781+05
•900000C+0G	•1000000÷00	•10000000	.2240986+05
•9090000400	.2000000+9A	•5000000+01	•2073959+05
•9000000+06	•4¢60060+00	.2500100+01	.1795424+05
•6C+000000+D0	•60000c0+00	.1666667+01	•1577985÷05
• 90000000+00	.8000000+00	.1250000÷01	.1406168÷05
<b>⊸</b> ∙∂00000000000	.1000000+01	.1000000+01	•1267883÷05
•9090000+0C	.2000000+01	•50000C0+00	<ul><li>8516713÷04</li></ul>
.5000000±00	•30000C0÷01	.3333333+00	•6428C75÷04
*8000000\$0C	.4000000+01	•250 <u>000</u> 0+00	•5168C03+94
•9000000 <del>0</del> 00	5000000+01	•2 <u>0</u> 00000+00	•4323270+04
.9000C0C+00	.8C000C0+01	.1257000+00	•2903752+04
* ảỏuũũuũ÷ũ¢	.10000000+02	•1000000÷00	.2383060+04
.9250000+0C	•0600000	<b>`</b> annonnc	<ul><li>2698493+05</li></ul>
•925000C+0C	°100000-01	•1000001+03	<b>.</b> 2674756∻05
•9250000÷00	.2500000-01	•4000000+02	•26396C7+05
•9250000+00	.5000000-01	<b>:</b> 2000000402	.2582266+C5
.9250000+00	.8000000-C1	•1250000+02	·2515548+D5
•9259909+00	*1600C00÷00	.1000000+02	. •2472355÷05
•925CC1C+00	•2000000÷00	•5000000+01	•2271888÷05
9250000+00	.4000000+00	.2500000+01	.1943231+05

# TWO STAGES - BOTH REUSABLE---TRAPEZE\*\*\*\*PAYLOAD DELIVERY ISP= 460.0

LAMBCA	WPL/WS	hS/WPL	DELTAV
.92500nc+nc	•6000000+00	.1666667+01	•1692710+05
•9250000±00	•8¢90∩00∻00	.1250000401	·1498605÷05
•92500CC+CC .	•100nnn0+ <u>0</u> 1	.10000000+01	•1344697÷05
•9250000+00	•2000000÷01	.500 <u>0000</u> 00	.8920262+04
•9250000÷0¢	·3000000+01	.3333333+00	.6697080+04
•9250000+0C	•4000000+01	.2500000+00	•5368424÷04
•9250000÷00	-5000000+01	.20000000+00	•4482463÷74
.9250000÷00	•8000000+01	.1250000+00	3001565÷04
• \$250000+00	•10000c0÷02	•1000000 <del>+</del> 00	.2460695+04
•95000°0÷00	•0000000	•0000000	.3065241÷C5
<b>.</b> \$50 <b>0</b> 0000+00	•1C00000-01	.1000000+03	•3034755+C5
•95000011+0¢	<pre>.2500000-01</pre>	•4000000+02	.2989632+C5
•9500000+00	•5000000 <del>-</del> 01	.2000000+02	.2916106+05
•9500 <u>0</u> 00400	-8000000-01	.1250000÷02	.2830770+05
• 95 <u>0</u> 00000+00	•10000n0+nn	.1000000c+02	.2775693+05
<b>.</b> 9500000+00	•2000 <u>000</u> +00	.5000000+01	·2522543÷05
•9500000+00	•4CQAQQA+QQ	.2501000+01	.2119684÷05
•\$579090+00	•6000000+00	.1666667+01	•1824177÷05
<b>.</b> 9500000400	.8000000+00	.1259000+91	.1601661+05
•9500000+00	•1000000+01	.1000000+01	.1428738+05
<b>.</b> 95000000+00	.2000000+0I	•5000000÷00	·9343568+04
•9500000000	.3n000000÷01	.3333333+00	.6974994 + 04
•9500000+00	•4¢00000+01	·2500000+00	.5573859+04
•950 <u>0</u> 0000+00	•5000000÷01	.20000000+00	.4644854+04
•9500000+00	.8000000+01	•1250000÷00	.3100610+04
•9500000+00	.1000000+02	.10000000+00	.2539114+04

TWC STAGES - BOTH REUSABLE---TRAPEZE\*\*\*\*PAYLOAD RETRIEVAL

ISP= 460.0

LAMBCA	WPL/WS	WS/WPL	CELTAV
.80000pc+nc	.0000000	•0000000	·1740385÷05
.8000000+00	-1000000-01	•1000000÷03	.1717059+05
.8909090+00	-2500CC0-01	<b>.</b> 4000000+02	.1683898÷C5
20+0000008	•5000CC0-01	•2000000+02	•1632891+n5
• 80000000+00	<b>.</b> 8000000-01	.1250000+02	•1577598÷05
.80^00000+00	•1000000÷00	.10000000*02	.1543754+05
<b>.</b> 8003000+00	-2000000+0D	•5000000+01	·1401633+05
•8000000400	<b>-</b> 4000000+00	<b>.</b> 2500000+01	.1201038+05
.80100000+00	<b>-6000000+00</b>	.1666667+01	<b>.</b> 1061036+05
.8000000400	<b>-</b> 8000000+00	•1259900+01	•9552672+04
•8000000+0C	.1c00000+n1	•10000000 <del>+</del> 01	.8714481+04
.800000000+00	<pre>-2ccooco+o1</pre>	<b>∙</b> ,5000000+00	•6165134÷N4
<b>,</b> 8000000+0¢	.3C000000001	.3333333+00	·4821975÷04
•8000000c+00	<b>.</b> 4000000+01	.2501000+00	•3975220±C4
·•8000000+00	•5000000+01	<b>.</b> 2000000+00	•3387766+C4
.80000000+00	•8000 <i>0</i> 00+01	•1250000±00	•2356234+04
•80v3Cù0 <del>+</del> 06	•1000000+02	•1000000+00	•1961289±04
•8250000+0C	• ¢¢00000	• 6000000	.1876646+05
.825000C+0C	·1.000009-01	•1000000÷03	.1848901+05
•8250000+00	·25000CC-01	•40000000÷02 -	.1809744+05
.8250000+00	.5CC0CC0-01	•20079ñ9÷92	.1750122+05
<b>.</b> 8250000+00	.8000000-01	•1250990+02	•1686233±05
•825000C+0C	•1000000÷00	•1000n00+02	•1647468+95
*825000C+0C	•2000000+00	.5000000+01	•1487070+05
<ul><li>8250000+00</li></ul>	•400000400	•25000000+01	<b>.</b> 1265771 <b>:</b> 05
<b>8250000+00</b>	•6¢00000÷00	.1666667+01	•1113919 <del>+</del> 05
•825000C+0C	-8000000+00	•1250000÷01	.1000294+C5
<b>.</b> 8250000+00	.10000c0+01	•10000000+01	<b>.</b> 9108167+04
•8250 <u>0</u> 00±00	.2000000÷01	•5000000+00	.6411923+04
•8250000+0C	•3000000+01	.3333333+00	.5003891+04
•825000C+0C	.40000000+01	·2500000+00	.41199C8+04

TWO STAGES - BOTH REUSABLE---TRAPEZE\*\*\*\*PAYLOAD RETRIEVAL ISP= 460.0

LAMBEA	WPL/hS	WS/WPL	DELTAV
8250000+00	.5C00CC0+01	•2000000÷00	.3508123÷04
<b>√8</b> 250000+00	.8000000÷01	•1250000±00	.2436570+04
•8250C0C+0C	•1000000+02	.1000000+00	-2027136+04
<b>.</b> 85000000+00	• ୧୯୬୭୬୯୦	•0000000	·2031757+05
•8500000+0C	.1000000-01	•100 <u>000</u> 0±03	.1998113+05
•8500C0Q+00	•25000C0-01	•4000000÷02	.1951(89+05
•8500000 <del>+</del> 00	.5000CCO-01	<u>. 2001000402</u>	.1880415÷C5
.8500000÷00	-8000000-01	•1250000+02	·1805774+05
.850CC0Q+0C	•1¢00n¢0+0n	.1000000+02	•1760970+05
<b>.</b> 85000000+00	.200000c+00	•5000000÷01	•1578811 <b>+</b> 95
•85nnnn0+ng	<b>.</b> 4000000+00	<u>.2500900+91</u>	·1333946+05
•8500000+00	•600000÷00	1666667+01	•1169044÷95
•8500 <b>0</b> 000+00	•8CCDOCO+CO	•125000C÷01	.1046922+95
•8500000¢00	•1000000÷01	.1000000+01	•9513953+ <u>0</u> 4
.8500C0G+0C	<b>.</b> 2000000+01	•500000C+00	•6663309+04
.850000C+0C	•3000CC0+01	.3333333+00	•5188257+04
•85∩0000÷0C	•400000÷01	.2500000+90	.4266125+04
•857 <b>0</b> 000÷00	.5C00CC0+01	.2000000+00	•3629529±C4
•8500C00+00	.8CG00CO+C1	•1250000+00	•2517366+74
.8500 <u>0</u> 00+00	.1000000÷02	•100 <u>0</u> 000+00	.2093298+94
<b>.</b> 875€000÷00	• 0 0 0 0 0 0 0	• 000,000	•2212065+05
.87500¢C+∩C	.1000000-01	•1000000+03	.217C179+C5
•8750000+0C	•25000C0-01	•4000000 <del>+</del> 02	•2112412+05
•8750000+00	•5001C00-01 .	.2000000+02	.2027089+05
•8750000∻00	.8000000-01	· .1250000+02	•1938656÷05
<b>.</b> 8750000+00	.10000ce+0n	<b>.100</b> 0000+02	<b>.</b> 1886289∻05
•875000C+00	.2000 <u>0</u> 00+00	.5007^00 <i>+</i> 71	.1677834+05
•875000C+0C	•4000000+00	•2500000÷01	1405941+05
•8750000÷00	.6000000+00	.1666667+01	.1226605+C5
<b>.</b> 8750000+0€	<b>.</b> 8୮୯೧Მ¢೧∻೧૭	·1257990+91	.1095267+05
.875000C+0C	•1000000÷01	•1000AAQ+A1	•9932597+04

# THO STAGES - BCTH REUSABLE---TRAPEZE\*\*\*\*PAYLOAD RETRIEVAL ISP= 460.0

LAMBDA	WPL/hS	WS/WPL	DELTAV
.8759000÷00	.2000000+01	•5000000 <del>+</del> 00	.6919467+04
.8750000+00	.3000000+01	.3333333+00	.5375139+04
.8750000+00	.4000000+01	.2500000+00	•4413974+74
•8750000+00	•5000000+01	•2000000+0 <del>0</del>	.3752000+04
.8750000÷00	.8000CCO+01	.1250000+00	•2598624+04
.8750C0C+2C	•1000000+02	•1007?00 <del>+</del> 00	.2159768+04
• გიეტტიე+იე	.0000000	.0000000	•2427969+ <sup>1</sup> 5
*3000C0040C	•10000CC-01	.1000000+03	•2373803+05
•3000000+0C	-2509000-01	•4009000+02	.2300541+05
~9000000400	•5C00CC0-01	.2000000+02	•2194951+C5
•90000000+00	.8000000-01	.1250000+02	·2088245+05
•9000000+00	•1000000+00	•1000000÷02	•2026159+05
.90000000+00	<b>.</b> 200000+00	•50000000÷01	<b>.</b> 1785366 <b>+</b> 05
• ᲛᲔᲘᲘ ᲢᲘᲘ ᲠᲘ Წ	•4 <b>0</b> 00000+00	.2500000+01	<b>.</b> 1482196+05
•9000000cc0c	•6¢000c0÷00	.1666667471	·1286824+95
• 40000000	•8000000÷00	.1250000+01	•1145458 <b></b> ♦05
• 90000000+00	.10000c0+01	.10000000+01	.1036493+05
• 9000000400	.2000000+01	•5000 <u>00</u> 00+00	•7180581+04
•91110110+00	•300000÷01	<ul><li>3333333+00</li></ul>	•55646°8+04
.9000000+0°C	.4000000+01	•2500000÷00	•4563279÷C4
<b>.</b> 9000000 <del>0</del> 00	.5000CCO+01	<u>.2000000+00</u>	<b>.</b> 3875556∻94
<u>, 9000000400</u>	•8000000+01	•12500 <u>0</u> 0+00	·2680351+04
.9000000±0¢	.1000000+02	.1000000÷00	•2226550÷04
•9250000+0C	<b>°</b> CC00000	• 3003000	•2698493 <b></b>
•9250CCC+0C	•100000n-01	•1000000±03	•2624164 <b></b> 405
•925900C+0C	-2500CCO-01	•400000°+02	•2526715+n5
•9 25000 0+00	•5C00C00-01	•2000 <u>0</u> 00+02	.2391353+05
•9250000 <del>+</del> 00	.8C00000-01	•1250000÷02	•2259385+C5
•9250000+00	•1000000+00	•1000000+02	·2184399 <del>+</del> 05
. •9250000+00	<b>.</b> 2(00)(0+00	.50CCOCC+Cl	.1902971+05
\$925000C+0C	•40009C0+00	.2500000+01	<b>.</b> 1563234∻05

### TWO -STAGES - BCTH REUSABLE---TRAPEZE\*\*\*\*PAYLOAD RETRIEVAL ISP= 460.0

LAMBCA	WPL/WS	WS/WPL	DELTAV
.9250000+0C	.60000C0+0q	.1666667+01	·1349953+05
•925000040C	`00±000000s•	.1250000+01	.1197641+C5
•925000C+QC	.1000000÷01°	.1000000+01	.1081188+95
•9250CCC+OC	•2000000+01	•500AAAA	•7446848÷04
•9250000+0C	.3000000+01	.3333333÷00 ·	•5756738 <b>∻</b> 04
•925000040 <i>0</i>	.4000000+01	•2500 <u>100+00</u>	•4714284+74
•9251001+0C	.5000000+01	.2007090400	.4000217+04
•9250000400	.80000000+01	.1250000+00	•2762552*64
•9250309+00	.1rn00r0+02	•100C000+00	.2293645*04
•95700000+70	• 0000000	• 0000000	•3065241÷05
•95000000+00	.1000000-01	.1000000+03	.2951887+05
<b>.</b> 9500000400	.2500000-01	<b>.</b> 4003000+92	•2811600+05
•9500000 <del>+</del> 00	- •5000,000-01	.2001010402	·2628443+05
•95000000+00	<b>.</b> 800000-01	.1250000+02	·2459430+05
。9500000+00	.1000000000	•,1000000+02	•2366578÷95
•\$500000000	.2000000+00	•5000000401	.2032687+05
<b>.</b> 9500000+00	•4¢QQQCA+QA	.2500000+01	•1649685+05
•950000C+0 <i>0</i>	•6000000+00	.1666667+91	•1416287÷05
•9590000 <del>1</del> +00	<u>.</u> 8010000+00	.1250000+01	·1251980÷05
•950 <u>0000</u> +00	.1r000cr+01	<b>.</b> 1/10/10/11	e1127448+C5
•9500000÷00	<b>.</b> 20000000∻01	.5000000+00	.7718489+94
•950CCCC+0C	.3000000÷01	.3333333÷C0	•59516C5+?4
•95000000÷00	<b>.</b> 40033C9+91	• 2507 C00÷00	•4866958÷94
•9500000+00	.5C00GC0+Q1	• 2000000+00	•41260 <u>0</u> 4÷04
•95000000+00	.8000000+01	•1250000+00	·2845232÷04
<b>.</b> 9500000+00	.1000000+02	.1000000+00	•2361058÷04

## TWO STAGES - BCTH REUSABLE---TRAPEZE\*\*\*\*RCUNDTRIP

LAMBCA	·· WPL/WS	WS/WPL	CELTAV
_801000C+0C	.000000	. 0000000	.1740385+05
.89999999	.10900CC-01	.1001000+03	.1705972+C5
8000000+0C	•2500000 <del>-</del> 01	•40071110+02	<b>.</b> 1657562∻05
0.0+0.00.000	•5C00000-01	.2000100+02	.1584256+C5
<b>\$</b> 00000400	<b>.</b> 8000000-01	•1250n00+n2 .	.1506349+05
80000000+00	•1C000C0+00	•1001000+02	•1459455+05
<b>~</b> 8003000+00	•2000000÷00	<b>.</b> 5000000+01	•1269058÷05
•8ŨJJCJC+JC	.400000÷00	. 2500000+01	•1018460+75
<b>.</b> 8000000+00	•6000000+00	.1666667401	•8565331+94
8333000+00-	.8000000000	•1250 <u>00</u> 0+01	•7415130+04
<b>,</b> 80000000+000	•1000000+01	•1000000+01	•6549342+94
.8^000000+00	.2000000+01	•5000000+00	•4169870+04
<b>.</b> 80000000+00	-3000000+01	.3333333+00	•3071609+04
<b>.</b> 8001000400	•4CCAACO+01	.2500100+01	•2434353+04
•8000C0G+00	•5000°°0÷01	•2000000+00	•2017127+04
•8003600+30	.8C00000÷01	•1259799+90	•1333369÷C4
•8001000+00	%1000000+02	•1900090+99	•1087895+04
•825000040¢	•0000000	• 6000000	•1876646+N5
•8250CC0+00	. 1000000-01	•10 <u>00</u> 000+03	•1836517 <del>+</del> 05
.8250000+0C	.2500CCO-01	•4000000+92	•1780451+05
•8250000+0 <u>0</u>	.500000-01	<b>.</b> 2000000+02	•1696384 <b>÷</b> 05
•825000C+00	•8C00000-01	÷1250000+02	•1608009+05
<b>.</b> 8250000+00	•1000000+00	·1000000+02	•1555245+75
.8250000+00	.2C00C00+00	•5 <u>0</u> 00110+01	.1343843+05
<b>.</b> 8250000+00	•4000000±00	•2500000÷01	•1071071+05
.825000C÷0C	•6000000+00	.1666667+01	•8973376+04
*8.550000+00	•8୯୬ᲔᲔᲔᲔᲔ	·1250000+01	.7749040+04
.82500001+0C	.1CCOOCC+01	•10n0a00+01	•6832142+04
.•8250nn0÷n0	.2000000+01	•5007730∻00	•4330369*04
•8250000+0C	.3000000+01	.3333333+00	<b>.</b> 3183674+04
• 825000 <b>0</b> ÷0 C	•4000000+01	•25909Q0+00	•2520425±04

TWO STAGES - BCTH REUSABLE---TRAPEZE\*\*\*\*RCUNDTRIP

ISP= 460.0

LAPBCA	WPL/WS	WS/WPL	CELTAV
•8250000+00	•5CCOCCO+01	•2007770+00	·2086984+04
•8250000+0 <u>0</u>	.8000000+01	.1250000+00	.1377990+04
•825000C+0O	.1000000+02	.1000000+00	.1123850+04
• 8500C0Q+0G	•909099	• 0000000	-2031757+05
<b>.</b> 8500000≎00	.1000000-01	•1000000÷03	.1984138+C5
•8500000400	·25000C0-01	•4900009492	•1918250+05
•8500C00 <del>+</del> 00	•500000 <del>-</del> 01	•2000000+02	.1820671+C5
•8500C00+00	<b>.</b> 8000000-01	.1250000+02	•1719484÷C5
<b>.</b> 85ባባባፀበ÷ດຕ	<b>.</b> 1000000÷00	•1000000÷02	•1659670+05
<b>.</b> 8510C0C+0C	-2000000+00	•5007000+01	•1423759∻05
•850000 <del>0</del> +00	<b>"</b> 4¢0090en+nn	. •2500000+01	·1126196+05
•850000C+ <u>0</u> C	•6000000+00	.1666667+01	•93966C7+04
•8500000÷00	<b>.</b> 8000000+00	•1250000+01	.8093191+04
<b>₽</b> §50000€00	.10000C0+01	.10000000+01	•7122337÷04
•850000Q÷00	.2000000+01	•5000000÷00	.4493313+94
.8500000000	<b>.</b> 36900000€01	.3333333+00	•3296948 <del></del>
<b>.</b> 85990000+00	•4000000+01	•250 <u>2000</u> +90	.2607216+04
•8500000±00	•500000+01	•200930C+CO	•2157319+04
.850000C÷00	•8000000÷01	•1250 <u>000</u> +00	•14228C7+04
<b>.</b> 8500000+00	.1C00C0C+02	1000000+00	.1159934+04
•8759nnc+no	•0000000	• 0000000	•2212065÷05
•875CCCC+0C	•1coooco-o1	•10700n0+n3	.2154219÷05
•875000C+0C	.2500000-01	•4000000+02	.2075214 + 05
•8750 <u>00</u> 00+00	.5000C00-01'	.2000000+02	•1960139+05
•8750000 <del>¢</del> 00	.8C00000 <del>-</del> 01	·1250000+02	•1842895 <b>*</b> ∩5
<b>.</b> 8750000+00	.10000r0+00	.10^70000+02	.1774459+05
.875000C+00	<b>.</b> 2000000+00 .	.5000000+01	• <b>15</b> 09556+05
•8750C^G÷00	<b>.</b> 4000000+00	. 2500000÷01	<b>.</b> 1184085÷05
<b>.</b> 875∩0∩0÷00	•60 <u>0</u> 0000+00	·1666667÷01	.9836196+94
•8750000+00	•00÷000ď038•	•1250070+01	.8448232+94
•8750000+00	.1ccocco+01	•1000100÷01	•7420329÷04

The STAGES - BOTH RELSABLE---TRAPEZE\*\*\*\*RCUNDTRIP

LAMBCA	WPL/WS	· WS/WPL	DELTAV
.875000C÷00	.20000000401	•5000000+00	•4658779÷04
.8750000+00	.3000000+01	:3333333+nn	.3411459+04
.8750000+00	.4000000+01	• 2500 <u>2</u> 00+00	.2694740+04
.8750000+00	•5000C00+01	•2000000+nn	.2228138+04
.8750000+00	•8000000+01	•1250000÷00	≥1467823+C4
.8759C00÷00	•1000000+02	•1001100+n1	.1196148+94
•30000000+00	•0000000	• ტიიიიიი	.2427969+05
• 90000000+00	.1CAAAOO-01	•100000c+03	.2355254+05
• 30,000000400	.2500000-01	<b>.</b> 4000330∻02	.22578CC+Q5
•9030000400	.5000000-01	•20 <u>0</u> 0000+02	.2119131+05
•9000000+00	10-0000038.	•1250000÷02	.1981148405
.90000000000	.1000000+00	•1000000+02	•1901886+05
•5000000+00	.200000+00	•5009900÷01	.1602163+05
•30000000+00	•4000000+00	•2500 <u>000+01</u>	•1245029÷05
• 90000000+00	<b>.</b> 6€90300∻00	·1666667÷01	•1029346+05
•9000000+DC	<b>.</b> 8000000∻00	•1250000+01	.8814976+04
•9000000¢00	•1c00000÷01	:1000000+01 .	.7726551+04
.9333634466	.2000000÷01	<sub>•</sub> 5000000+00	≈4826846÷N4
• გისრმბბა+ნ წ	.•3000000÷01	•3333333+00	.3527234*04
.9000000 <del>1</del> 00	.4C00000+01	•250000C+00	<b>.</b> 2783019∻94
* ᲒᲘᲜᲘᲢᲐ ᲬᲐ Წ+Ე Წ	.5C00C00+01	<b>∙</b> \$0000000∻00	•2299448+ <u>0</u> 4
•მርიიშეი+ინ	.8000000401	•1250 <u>^</u> 00+00	•1513939÷04
•9000000#00	<b>.</b> 100000402	.1000000÷00	.1232451+04
•9250000+00	•0000000	• ୧୯୦୯୦୯	•2698493+05
•9250 <u>00040</u> 0	.1c000c0-01	•1000000+03	.2602023+05
•925ngq(+nc	.2500000-01	<b>.</b> 4099090+02	.2476581+05
•925000 <u>0</u> +00	.5C39CC0-01	• 20/00000 € 02	<b>.</b> 2304240+05
•9 250000±00	.8000000-01	.12500000+02	<b>.2138388</b> +05
•9251001+00	.10000CC+C0	.1000000÷02	.2045159*^5
•9250000+00	<b>.</b> 2000000+00	, <b>.</b> 50000000+01	.1702751+05
•9250000+0C	•4000000+00	.2500000÷01	<b>.</b> 1309366*05

TWO STAGES - BOTH REUSABLE---TRAPEZE\*\*\*\*RCUNDTRIP

LAMBCA	WPL/KS	WS/WPL	DELTAV
~ 9250 <u>000</u> 0400	.6000000±00	.1666667+01	•1076\$88÷05
•9250 <b>0</b> 000+00	.8000000+00	•1250000÷01	.9193914+14
•925NOOC+OÇ'	•1000000+01	.10000000+01	.8041475+04
- <b>.</b> 9250000+00	-2000000+01	•5000000+00	.4997599÷04
•9250000±0C	.30000000+01	•3333333÷00	*3644302÷04
.925000C+0C	<u>.4000000+01</u>	• 2500000+00	.2872037+04
· •9 250000±00	•5000000+01	•2000000+0 <del>0</del>	.2371255÷G4
•925CQCC+0C	.8000000+01	•1250000+00	•1558458÷₫4
•9250000+00	.10000c0÷02	.10000000+00	·1268967+04
.95^0,000+00	·• 0000000	.0000000	•3065241÷05
`•9500000+00	.1000000-01	•1001010+03	·2924242÷05
- <b>.</b> 9500000410	.2500000-01	.4000000+02	.2750864+C5
•9500000+00	•50°0000 <del>-</del> 01	.2000000c+02	.2526252+C5
•95900000+00	.8600000-01	•1250000+02	•232C835÷05
•95^Q^Q^Q+QQ	.1000000400	*1007030+02	•2208848÷95
- •9500010÷n0	•2000 <u>0</u> 00+00	•50000000÷01	•1812823+05
<b>`</b> .9500000+00	-4001100+00	•2500000÷01	•1377496÷05
•9500000+00	<u>.6000000</u> 00+00	.1666667+01	·1126713÷05
•9500000÷0C	•8000000+00	•1250000+01	•9586224+04
•9500000+00	.1cgnqco+01	.1000000±01	.8365619+C4
•9500000+00	•2000 <u>0</u> 00+01.	•5000000÷00	.5171129∻04
•9500000+00	.3000000+01	•3333333+00	•3762693÷04
.9500000+00	.4000000+01	。25000000÷00	.2961837<94
•95000000+00	.5000000÷01	•20000000÷00	.2443569+04
· • 9500000+00	.8000000401	•1250000÷00	•1604081÷04
9500000+00	•10000CC+02	<b>.</b> 1000000≁00	.1305575+04

ISP= 460.0

LAMBCA	WPL/WS	WS/WPL	DELTAV
.80000000+00	•0000000	• 0000000	.1320011+05
20+202000ns.	•1000000-01	•1000000+03	.1315172+05
.80000CC0+0C	·2500000-01	•4000000c+02	.1307928+05
<b>\$</b> 00000040C	•5000000-01	·2000000+02	.1295895+05
•8000000+00	.8CC0CCO-01	·1250010+02	.1281532+05
.8000000±00	•1000000+00	.1000000+02	.1272009+05
80000000+00	•20000G0+00	.50000000+01	.1225148+05
<b>.</b> 89000000+00	•4070000+00	·2500000+01	.1136155+05
.800000C+0C	•6000000+00	•1666667+91°	·1054601÷05
•8000000+00	<b>.</b> 8¢00000+00	•1250000+0I	·5808744+04
<b>.</b> 8000000+00	•1000000÷01	•1000000+01	.9146978+04
.80000000+00	•2000CC0+01	•50N0Q00+NN	.6738849+04
•8010000±00	•300000+01	• 3333333+00	•52865C5+04
.80000000400	•4000000+01	•2500000+00	•4336868+04
.8010000+0C	•5000C00+01	• 2000000+00	.3672346+04
•8000000+0C	•8C90000+11	•1250000+00	.2511170÷04
.800000c+oc	•1000000÷02	•1000000+00	.2072877+C4
.8250000400	-6600000	• 0000000	.1427826+05
.8250000∻00	•1000000-01	•10000n0+03	·1422306+05
.825000C+∩C	·2500000-01	¹•4000n00+n2	·1414743+05
.825000C+OC	•5C00C00-01	•2000000+02	·1400327+05
.825000040C	.8000000-01	•1250nnn+02	.1383969+05
•8250000±00	·1000000+00	•10000n0÷02	.1373132+05
.8250C00+00	•2000000e00	•5000000+01	·1319904+05
•8250 <u>00</u> 00400	•400000+00	·2509000+01	.1219298+05
.8250000¢0C	•6000000400	•1666667+01	•1127710+05
•8250000+0c	•8C00C00+00	·1250n00+01	•1045460+05
•82500Q0+QC	1000000+01	•1000000+01	•9721041+04
•8250000+00	.2000000+01	`•5000000+00	•709C59C+04
•8250000+0C	.3C000CC+CI	•3333333+00	•5532577÷04
•825000Q+00	·4000000+01	•2500000÷00	·4524204+04

TWO .STAGES - BOTH REUSABLE---TRAPEZE NO. 2 \*\*\*\*PAYLOAD DELIVERY

ISP= 460.0

LAMECA	WPL/WS	WS/WPL	CELTAV
•8 250 10 1÷0 C	•50G0C0C+01	•2009000+00	.3822967+04
•8250000+0C	.80000C0+01	•1250000+00	•2605394+04
<b>.</b> Ɓ25∩ე∩ე∻∩ე	.1000000+02	•1000000±00	•2148133+04
•85 <u>00</u> 000400	•000000	•0000000	•1551293+05
•8590CAC+A3	.1000000-01	.1000000+03	•1544931∢75
•850000¢÷0¢	·2500000-01	•4000000+02	·1535413+05
•8500000÷00	•5000000 <del>-</del> 01	•2000000+02	.1519623+75
•8500 <u>0</u> 00+00	•8000000-01	•1250000+02	.1500806+05
•85∩ე∩ეე∻ეე	.1000000+00	.10000000+02	.1488350+05
<b>.</b> 850∖0000+00	<b>.</b> 2000000+00	•5000000+01	.1427286∻05
• 85 <u>^0</u> ^∩^0+00	•40000C0+00	•2509000+01	.1312462+05
\$85000QC+00	•6000000+00	.1666667+01	.1208723÷05
•85000Q0+00	•8C00000÷00	.1250000+01	.1116291+05
•850100 0+00	•1000000+O1	•1000000+01	·1034479÷05
• 850000¦0+00	•2707 <u>70</u> 0+01	•50000000+00	.7460571+04
•85n000¦0+0C	`-3000000+01;	.3333333+00	•5787639÷04
•8500C0¦0+∩0	•4000000÷01	•2500000+00	•4716681+04
•8500cqq+qc	.5C00000+01	•2000000¢00	·3976876÷04
•850000 n+00	<b>.</b> 8000000+01	•1259999÷00	.2700877÷04
•8500000+01	.1CCGGCO+G2	•1000000+00	-2224186+04
•8750CMC+00	•000000	•000000	·1696013+C5
•875000°0÷00	.1000000-01	•100 <u>00000</u> 00	*1688577*05
<b>.</b> 87500000+00	<b>.</b> 2501101-01	•4000000402	•1677456+05
•875000C+0C	•5000000 <del>-</del> 01	•2000000÷02	.1659015+05
•875 <u>0</u> 000+00	•8000000 <del>-</del> 01	•1250000+02	.1637059÷?5
•8750000+00	•10000c0÷00	.1000000÷02	•1622535÷C5
•8750000±00	•2000000+00	•2000000+91	.1551480+C5
•875000 c+nn	•4 <u>000000</u>	.2500000+01	.1418665+05
• 875 CCC C+0 C	•6000000+00	•1666667+01	·1299775÷05
•875700°¢0°C	•8C00000÷00	•1250000÷01	•1194872÷05
•875nnnn+nn	.1000000+01	•1000000÷01	·1102890+05

TWO STAGES - BOTH REUSABLE---TRAPEZE NO. 2 \*\*\*\*PAYLOAD DELIVERY

ISP= 460.0

LAMB CA .8750000+00	WFL/#S	WS/WPL	DELTAV
.8759000+00 .875000+00 .875000+00 .875000+00 .875000+00 .875000+00 .8750000+00 .900000+00 .9000000+00 .900000+00 .900000+00 .900000+00 .900000+00 .900000+00 .900000+00 .900000+00 .900000+00 .900000+00 .900000+00 .900000+00 .900000+00 .900000+00 .900000+00	.200000+01 .300000+01 .4000000+01 .500000+01 .800000+01 .100000-01 .250000-01 .500000-01 .100000+00 .400000+00 .400000+00 .400000+00 .600000+01 .200000+01 .200000+01 .200000+01 .200000+01 .200000+01 .200000+01 .200000+01 .200000+01 .200000+01 .200000+01 .200000+01 .300000+01 .300000+01 .300000+01 .300000+01 .300000+01 .300000+01 .300000+01 .300000+01	•5000000+00 •333333+00 •2500000+00 •2000000+00 •12500000+00 •10000000 •1000000+02 •2000000+02 •1000000+02 •1000000+02 •1000000+01 •2500000+01 •1666667+01 •1250000+01 •1000000+01 •5000000+01 •5000000+01 •1000000+00 •1000000+00	•7852385÷04 •6052472+04 •4914629+04 •4914629+04 •4134239+04 •2797658+04 •2301054+04 •1871363+05 •1862483*05 •1862483*05 •18627203*05 •1801027*05 •183727*05 •1699284*05 •1542619+05 •1283367*05 •1178814+05 •8267755*04 •6327971+04 •5118415*04 •4295237*04 •2895779+04 •2378759*04 •2094909*05
• \$250000+00 • 9250000+00 • 9250000+00 • 9250000+00	•2500000-01 •500000-01 •800000-01 •100000+00 •200000+00	•4000000000 •20000000000 •1250000+02 •1000000000 •5000000001	•2067518+05 •2040335+05 •2008027+05 •1986695+05 •1882896+05

TWO STAGES - BOTH REUSABLE---TRAPEZE NO. 2 \*\*\*\*PAYLOAD CELIVERY

ISP= 460.0

LAMBCA .	WPL/WS	#S/WPL	DELTAV
.925001C+0C	.6000000+00	.1666667+01	.1526727+05
.9250000±00	•800000+00	.1250000+01	<b>.</b> 1385070+05
<b>.</b> 9250000+00	.1000000+01	•1 <b>^</b> 0¢^^0¢^	•1264398÷C5
•9250 <u>000+0</u> 0	.2000000+01	<u>.500</u> 0000+00	.8710714+94
.9250000+00	.3000000+01	•3333333+00	.6615174+04
•9250000÷00	<b>.</b> 4000000+01	• 2500000+00	•5328449÷04
•925000C÷0C	•50000000+01	• 2000000+00	•4460G67 <del>+</del> 04
•9250QQC+0C	<b>.</b> 8000000+01	.1250000+00	<b>-</b> 2995281÷04
•9250900+00	•100000+02	•1000000+00	•2457321÷04
•9500900400	•0000000	•0000000	•2406°69+°5
• 9500000400	·1000000-01	•1000000+03	.2391590+05
•9500000000	.2500000-01	.4907900+02	•2369956 <b>÷</b> 05
•9500000+ <u>0</u> 0	.5000000-01	.20000000+02	.2334146+05
•9500000400	.8000000-01	.1250000+02	, •2291639+05
.95^00000+00	.1000000+00	•1007000+02	.2263615+75
.9500000400	.2000000+00	.50000004Q1	•2127542÷05
•9500000±0C	.4C00000+00	•25000000+01	.1883291+05
.95000000÷00	•6000000÷00	•1666667÷01	.1676889÷05
•9500000¢0C	.8000000+00	•125000C+01	•1505394÷95
•95000000400	.1coonon∻oi	.10000000+01	.1362942+05
•9500000+00	.2000000+01	<b>.</b> 500000+00	•9185867+04
<b>.</b> 9500000400	•30000c0+01	. • 3333333+00	•6915292+04
.95^ <u>}</u> 0000400	.4000000+01	.2509000+00	<b>.</b> 5545188+94
.95000000+00	.5000000+01	·2000000+00	<b>.</b> 4628945 <b>÷</b> 04
•9500000÷00	.8000000+01	· 1250000÷00	.3096210+94
.95000n0+0C	.1000000÷02	•10000n0÷00	.2536762+04

TWO STAGES - BOTH REUSABLE---TRAPEZE NO. 2 \*\*\*\*PAYLCAD RETRIEVAL

ISP= 460.0

LAMBĊA	WPL/WS	WS/WPL	DELTAV
.8011000+00	•000000	•0000000	.7560251+04
•80000000+00	•1000cco-o1	·1000000+03	.1320011+05
•89000000400	•2500000-0I	•4000000+02	.1304687+95
<b>.</b> 80000000400	•5CC0000-01	•200000c+02	.1282671+05
•8000000÷00	<b>.</b> 800000-01	·1250000+02	·1248308+05
•80000CC+0C	•10000cc+co	•1000000+02	.1210431+05
<b>.</b> 80000003±00	.2000000000	50000000+01	·1186953+05
<b>10+0700078</b>	•4000000÷00	•2500000+01	.1086279+05
•800000000	•6000000+00	.1666667+01	•9398386+04
.8000001+0C	<b>.</b> 800000+00	•125000C÷01	· 8355824÷04
.8000000+00	•1CC0000+01	•1000000÷01	<ul><li>7560251+04</li></ul>
.80000000+00	.2C000000+01	.50C0000+00	•6925735÷04
•8000000400	.30000CC+Cl	•3333333+00·	•4974664+04
<b>.</b> 80000000000	•4CQQAQQ+01	•2500000+00	•3931136+04
*80000000+0C	•5C00000+0I	20000000+00	•3265602+04
•80000000÷0C	•8CC3^000±01	•1250000+00	•2799478 <b>÷</b> 94
•8000000+0G	•1000000+02	•1000000+00	·1970142+04
- •8250000÷00	•0000000	•0001120	.1808277÷04
<b>.</b> 8250000∻00	.1000nn0-01	•1000000+03	•1427826÷05
•8250000±0¢	.25000C0-01	•40C0090+02	•1409664÷95
•8250,000¢0¢	<b>.</b> 5000000-01	• 20000000+02	.1383710+05
.825000C+0C	.80000C0-01	•1250000+02	.1343518+05
•8250000±00	<b>.</b> 1€00000000	•1000000±02	.1299630+05
•8257000+00	- <b>.</b> 2900960+00	.5000000+01	•1272629÷C5
<b>.</b> 8250000+00	•4000000+00	.2500000+01	• <b>11</b> 58398÷15
.82500^0+0C	•60C0CCG+00	.1666667+01	•9959239∻04
•8250000+00	•8CQCACD+00	.125၇000+01	•8823094∻04
•825090C÷9C	·1000000+01	•100∮000÷01	• <b>7</b> 965126÷04
•8 250000÷00 +	.2000000+01	<b>`</b> 5000000+00	•7285497÷04
•8250CCC+QC	•30000CC+01	•3333333+00	•5215610÷04
, •825090040C (	.4C0900C+91	•25000000+00	.4117468+04

TWO STAGES - BOTH RELSABLE---TRAPEZE NO. 2 \*\*\*\*PAYLGAD RETRIEVAL

ISP= 460.0

LAMBCA	. WPL/WS	WS/WPL	DELTAV
.825900C+0C	•5000000÷01	.2000000+00	.3419229+04
.8250000+00	.8000000+01	~1250700+07	·• 2930887+04
.8250000±0C	•1000000÷02	1000100+00	.2062877+04
<b>.</b> 8500000400	.0000000	•0000000	·1892735÷04
8500000400	.1000000-01	.1000000÷03	•1551293+05
.8500000000	•25000C0-C1	•4 <u>00</u> 0000+02	.1529321+05
•850000C+0C	•5000000-01	·2000000÷02	•1498150+05
<b>.</b> 8500000400	.8000000-01	•1250000÷02	•1450367+05
•85 <u>11000</u> +00	·10020C0÷00	•10 <u>0</u> 0000+02	•1398813+05
.8509000+00	•2^00000÷00	.5000000+01	.1367390+05
<b>-</b> 8500000400	•4000000+00	.2500000 <del>0</del> 01	·1236626+05
<b>.</b> 85000000+00	<b>.</b> 6000000+00	.1666667÷∩l	.1055497+05
<b>.</b> 85000000+00	•800 <b>)</b> 000+00	.1257000+01	.9314033+04
•8500000400	•1000000+01	.1009900+01	•8387721÷94
<b>.</b> 8500000000	· .2000000÷01	<b>.</b> 5000000+00	• <b>7</b> 659385+114
<b>₽</b> 85100000400	.3C00CCO+C1	.3333333+00	•5463776+04
<b>.</b> 85000000+00	`_4000000;+0 <u>1</u>	£2500910÷90	•4308897 <del>*</del> 94
.•85100000+00	•5`CCO000+01	.2000000+00	.3576921+04
•8500000 <del>0</del> +00	<b>.</b> 8000000+01	•125 <u>0</u> 000+00	.3065741+04
•8500001 <del>+</del> 00	•1¢00001+02	•1000 100+00	•2158071÷04
•8750000÷00	• ccoooc	• 0,000,00	•1979572÷94
<b>.</b> 875∫0∩0+00	.1000ccc-01	•1000070÷03	•1696013÷G5
•87500C0+0C	<b>.</b> 2500000-01	•4000000÷02	•1668679÷05
<b>.</b> 8759000+00	.5000000-01	.2000000÷02	.1630283*05
<b>.</b> 8750000±00	<b>.</b> 8000070 <del>-</del> 01	•1250000+02	•1572239+95
•8757000÷00	.1000000+00	.1000000+02	•1510578+05
.8750000+90	•20000C0+00	<b>.</b> 5000010∻01	•1473453+05
<b>.</b> 875 ∖\\0,000 +00	.40900000	.2500000÷01	<b>.</b> 1322094+05
<b>.</b> 8750000+00	.6C00000400	.1666667+01	·1118996+05
.8750C0C+0C	•8000000+00	.1250000+01	•983C891*04
.875000C+0C	.10000000401	•1000000÷01	。8829395÷74

INO STAGES - BOTH REUSABLE---TRAPEZE NO. 2 \*\*\*\*PAYLOAD RETRIEVAL

LAMBCA	WPL/WS	WS/WPL	DELTAV
.8750000400	•2C000C0+01	•5000000÷00	.8048315+04
.8750000÷00	.30/00/00+01	• 3333333+00	•5719448+C4
.8750000+00	.4000000+0I	•2500000÷00	<u>.</u> 4505592÷04
.675(000400	.5000000+01	<b>.200</b> 0000,∻00	•37388C8+04
.875000C+0C	.800000n+01	•12500 <u>0</u> 0#00	•3204148÷94
.8751100+00	•1000¢00+02	•1000000÷00	•22558¢2÷04
• 90,10,000+00	• 0000000	•0000100	.2068876+04
.90 <u>70000</u> 400	•1000 <u>000</u> -01	. •1000000+03	•1871363÷05
• ᲑᲐᲥᲔᲔᲘᲔᲬᲘᲔ	•2500000-01	•4990990÷02	.1835951+05
• 90000000+00	.5000000-01	•2000001+02	•1786928+05·
•904100C÷0C	<b>.</b> 8/00000-01	•1250010±02	<b>.</b> 1714247+05
•90000000000	.100000+00	.1000000+02	•1638728+05
• 3 0 0 0 0 0 0 4 0 0	.2000000+00	•5000000+01	•1593985 <del>+</del> 05
•9000000+00	<b>.</b> 4000000+00	•2500300+01	·1416296+C5
* 46000000+0C	•6000000+00	·1666667+N1	.1186951+05
• 900000000000	.8000100±01	•1520¢0C+¢1	•1037628÷05
•9001 <u>00</u> 0400	.1000000+01	•1000000÷01	•9291688*04
•8000000+00	.2000000+01	•50000000+00	•8453302∻04
<b>.</b> 9ฏๆดเกฏ÷กเ	.3000000+01	' <b>.</b> 3333333∻00	•5982933 <b>÷</b> 04
• 3000 000 0 +00	.4000000+01	.2500000+00	•4707733÷04
,9000000000000000000000000000000000000	.5000000+01	•20 <u>0</u> 00100+00	•3905025*04
• 90000000400	.8000000÷01	•1250000+00	.3346219+04
• ᲛᲡᲘᲔᲬᲜᲬ+ᲘᲬ	%1r000000+02	•1000000÷00	•2356157÷04
•925 <u>0</u> 000400	•0000000	•0000000	·2160747÷04
. •9250000+00	.1000000-01	•1000000+03	. 2094909÷05
•9250000÷00	.2500000-01	•4091090÷02	•2046026÷05
•925 <u>000</u> 0+00	•5000000 <del>-</del> 01	•2₫0ᲔᲘ00÷02	•1979924+05
<ul><li>9250℃06÷0€</li></ul>	.8000000-01	<b>.</b> 1250000+02	•1884835+05
.9250C00+0C	.1000000+00	•1000000÷02	.1789156÷05
•925000 <b>0</b> +00	.20000CD+40	•5000010÷01	.1733751+05
•9250000+00	.4000000+00	.2500000+01	.1521260*05

. TWO STAGES - BOTH RELSABLE---TRAPEZE NO. 2 \*\*\*\*PAYLOAU RETFIEVAL ISP= 460.0

		*	
LAMBCA	WPL/NS	WS/WPL	DELTAV
+925000C+nc	-6000000+0A	.1666667+01	•1269C17±05
•9750000+00	•8000000+00	•125nnnn+01	.1095326+05
.925000G+0C	•1000000+01	<b>1</b> 000000÷01	.9776346+C4
•925000C+0G	.2000000+0I	•500 <u>0</u> 000÷00	.8875477+C4
•9250000÷00	.3000000401	•3333333+00	•6254567+04
•9250000+00	•4C00000+01	•25000001÷00	•4915511+94
•9250000+00	•5000C00+01	•2000000÷00	•4075716+94
.925000C+QC	.8000000+01	•1250300÷00	.3492077+04
•9250000±0C	•1000000+02	•10000000+00	•2459228÷04
<b>.</b> 9500000+00	• 000000	• 0000000	•2255289+C4
<b>.</b> 9500000+00	.1000000-01	•1020000+03	•2406069+C5
<b>.</b> 9500000+00	•25000n0 <del>-</del> 01	•40000000+02	.2330501+05
•9510010400	•5c00c00-01	•200 <u>0</u> 000402	2232705405
•950000°±0°	•8C00000-01	•1259990÷02	.2099233+05
•9500009÷00	•1ragana+nn	•1000010÷02	.1971723+05
•9500000400	•20000r0+n0	•5000000401	•1900405+C5
•95 <u>0000</u> 00400	•40000cc÷c0	.2500000+01	·1639839+05
.9500000+00	•6000000+00	.1666667+91	.1339008+05
•95100000+00	•8C00000+00	•1259000÷01	•1156544+95
•9500000±0C	•1000000+01	.1000000401	·1028537+05
•9500000+00	•2000000÷01	•5000000+00	.9316108+94
. •9500000+00	.3000000+01	•3333333+00	•6534684÷04
` <b>.</b> 9511000+00	.4000000+01	•2500000 <del>+</del> 00	•5129132+ <sup>04</sup>
.950 <u>0000</u> 400	•5000000+01	<b>.</b> 2000000+00	•4251034÷04
•9510C10+0C	.8000000+01	•1250300+00	•3641852+n4
•9500000+0 <b>0</b>	•1000000+02	.1009700÷90	•2565113+04

TWO STAGES - BOTH REUSABLE---TRAPEZE NO. 2 \*\*\*\*ROUNDTRIP ISP= 460.0

· LAMBDA	WPL/WS	WS/WPL	DELTAV
•8220000+00	.0000000	.0000000	•1320011+C5
•8000000+00	•1000000 <del>-</del> 01	•10000n0÷03	<b>.1299973</b> +05
.8000000400	.2500000-01	.4000000000	.1271332+05
<b>.</b> 8000000+00	•5000000 <del>-</del> 01	•2000000÷02	.1226984÷05
•80000000+00	10-000cc08.	.1259090+02	•1178696+95
•8000000+00	.10^0000+00	.1000000+02	.1148887+05
•800 <u>00</u> 00+00	.2000000+00	•5000000+01	.1023826+05
<b>.</b> 800000+00	.4000000÷00	.2500000+01	<b>.</b> 8490813+04
•8000000+0G	•600000+00	.1666667+01	.7302083+04
,80000000e+00	•80000C0÷00	•125009C÷01	•6428326+94
<b>30+0000008</b>	.1000000+01	.1000000+01	•5753490÷04
•8000000÷0C	.2CCOCCO+01	•5000000÷00	.3813087+04
.80000000+00	.3000CCO+01	.3333333+00	.2867856+04
•8770D70÷00	.4000000÷01	.2500000+00	•2302335÷04
.8000000000	.5C00CC0+01	.2001000+00	•1924568+04
.80000000400	.80 <u>000</u> 00+01	•125000C+QQ	•1291473+04
•80000000+00	.1000000+02	.10c0000÷00	•1059640+N4
•82500ng+nc	.000000	• 0000000	·1427826÷05
<b>.</b> 8250000+0€	.1000CCC-01	•1000000+03	·1404296+05·
.8250000÷00	.25000CO-01	<b>.</b> 4007300+02	.137C844÷95
•8250990÷90	.5000CGO-01	•2000000+02	.1319443+05
.825 <u>0</u> 000+00	-80000000-01	•125000C+02	•1263879÷05
.8250000+0C	.1^00000+00	.1000000+02	•1229990÷05
<b>.</b> 825000040€	•2000000 <b>÷</b> 00	•5000000+01	.1089200+05
.8250000¢00	.40003¢0÷03	.2500000÷01	•8965655÷N4
<b>.</b> 8250000+00	•6C00000÷00	.1666667+01	•7676846+04
•8250000÷00	•8C00CCO+OO	.125090C÷01	•6738630+04
.8250CAC+0C	.1000000+01	•1000000+01	•6018606÷C4
•8250000+00	.2000000+01	<b>∙</b> 5000000÷00	•3967243+C4
•825000C+0C	.3000000+01	.3333333400	.2976713+04
.825000C∻00	.4000000+01	.2500000∻00	•2386485÷C4

TWO STAGES - BOTH RELSABLE---TRAPEZE NO. 2 \*\*\*\*ROUNDTRIP

LAMBCA	HPL/WS	WS/WPL	DELTAV
•8250C0C+0C	.5000000+01	.2000000+00	.1993152+94
•8250000+00	.8000000÷01	•1250000+00	.1335572+04
•8250000÷00	.1000000+02	•1000000+00	•1095258 <del></del>
.85000000÷00	•ccconoo	•0000000	•1551293÷05
•8500000+00	.1000GCC-01	•1000010+03	•1523155+05
<b>.</b> 85000001+00	.25000CO-O1	•4000100+02	.1483436+05
•8500000÷00	.5000000-01	• 20000000+02	•14230C7+05
•85000001+0C	.80000CO-01	•125000C+02	•1358441+05
•850000C+00	.1C00G00+00	•1000000+02	•1319415+05
•85 <u>0</u> 0000+00	.2<00CC0+CO	•50000000+01	<b>.</b> 1159787+05
•8500000+00	<u>.4000000</u>	.2500000+01	.9466984+04
<b>.</b> 8500C00+00	•600000+00	.1666667+01	•8067850+04
.8520020+90	•8000000+00	•1250 <u>00</u> 00+01	•7060C06+04
.8500000+00	.1000000+01°	.1000100+01	•6291799÷04
•850900049C	<b>.</b> 2rggqcg+a1	•50 <u>0</u> 0000+00	.4124182+04
1850000C+00	.3000000+01	•3333333+00	.3086988404
.8504000+00	`~4000000+01	<u>. 2500000400</u>	+2471498+04
•8500000+0€	.5000r00+01	•2000 <u>000</u> +00	•2062316∻04
•8500000¢^Ç	1:0+000CC98•	•1250000+00	.1375918<04
•8500CCC+0C	.1000000+02	•100000C+00	•1131G38+04
•875000^÷00	• 0.00000	• ถภกจกอง	•1696013+05
<b></b> 8750000400	.1000000-01	•1000000+03	•1661503+Q5
·8750000+00	.2500000-01	.4000000+02	•1613262÷05
•8750CAQ+QC	<b>.</b> 50 <u>00</u> 000-01	• 2000000+02	<b>.15</b> 40850*05
.8750C00+00	<b>.</b> 8000000-01	<b>.</b> 125000 <u>0</u> ←02	•1464657+05
<b>.</b> 8750000+00	<b>.</b> 1000000+00	•1000000 <del>+</del> 02	<b>.</b> 1419136∻95
<b>.</b> 875∩∩QO+∩@	<b>.</b> 2009000+90	<u>*5001000+01</u>	•1236511÷05
.8750000+00	<b>.</b> 4000000+00	•2501000÷01	.9997893+14
•8750000 <del>+</del> 00	<b>.</b> 6010000+00	•1666667 <del>+</del> 01	.8476504+04
•8750¢¢¢¢n0	•8000000+00	•1259090÷01	•7393218+04
• 875 CCCC*00	•1C00000+01	1000000401	•6573531 <i>+</i> 04

THO STAGES; - BOTH REUSABLE---TRAPEZE NO. 2 \*\*\*\*ROUNCTRIP

LAMBEA	WPL/WS	'WS/WPL	DELTAV
.8750000400	.2CC0CCC+01	•5009900+09	.4283588+04
.875000040C	.30000000+01	•3333333+00	<b>.</b> 3198710+04
.8750000±00	.4000000+01	.2500000÷00	.2557387÷04
.8750000+00	.5CC0000+01	.2000100+00	.2132069+04
•8750000+00	.8000000+01	•125000C÷00	•1424512÷04
•8750000+00	<b>.</b> 100000+02	<b>.1</b> 000000400	·1166982+04
•30\0000\+0¢	.000000	•0000000	•1871363+C5
• ᲒᲡᲡᲘᲗᲗᲘᲥ+ᲘᲗ	.100000-01	•1000000+03	·1.827438+05
•9000000+0G	.25000C0-01	<b>-40000000+02</b>	•1766912+05
.90000000+00	.500000-01	•2001000+02	•1677785÷05
.9000000+0C	<b>.</b> 8000000-01	<u>.</u> 1251100+02	•1585968+C5
•9000000+0C	.1000000+00	•10000000+02	.1531960+95
•9000000+00	.2000000+00	•5000000+01	.1320576+05
•9000000+00	.40000C0÷60	.2500000+01	•1056208+05
•900000040C	<b>.</b> 600000+00	.1666667+01	•89A442A÷A4
•900CC1C+00	.8000000+00	<pre>.1259000+01</pre>	•7739110+74
<b>.</b> 900000000	.1000000÷01	•1000000+01 ·	•6864301+04
<b>,</b> 90000000000	.2000000+01	•5000000 <del>+</del> 00	•4446751+04
.90000000+00	.3000000+01	•3333333÷0n	•3311910÷04
<b>.</b> 9900900+00	<b>.</b> 4000000+01	•2500000+00	•2644164+94
• ลบดไปต์ดับ+ดิด	.5000C00+01	• 2 <u>0</u> 000110+01	•2202415 <del>*</del> 04
•30000000+00	<b>.</b> 8000000+01	•12500111÷00	•1469355+04
.900Q(0r+jr	•1C000C0+02	.1000000+00	•1203090+04
•9250001+01	0000000	•000000	.2094909495
•9250000+00	.1000CCO-01	•1000000÷03	-2035615+05
.925000C+^C	•2500000 <del>-</del> 91	.4000000+02	.1955780+05
• 9250000+00	.5000000-01	.2000000+02	•1841642÷05
•92500CC+0C	10-0000098.	.1250000+02	.1727659+05
• 92500000+00	.1000000÷00	.1000000+02	.1662065+05
•9250000+0C	.2000000+00	.5007000471	.1413598+05
•925000Q+7C	•4000000÷00	•2500000÷01	.1116494+95

TWO STAGES - BOTH REUSABLE---TRAPEZE NO. 2 \*\*\*\*ROUNCTRIP

LAMBEA	WPL/WS	WS/WPL	DELTAV
•9250000+0C	•6000000+00	.1666667+01	•9353460+04
•925000C+0C	.8000000+00	•1250n00+01	•8098638÷04
<b>∵</b> 9250000±0¢	.1000000+01	•10 <u>0</u> 00000401	•7164666+04
•9250000+00	.2000000+01	•5001000+00	•4612564÷04
•92500CC+00	3000000+01	.3333333+00	.3426618+04
·•9250000+00	.4000000+01	• 2500000+00	•2731844+04
•9250C0C+0C	.5000C00+01	•2001110+00	•2273364+04
•925000C+00	•8C00000+01	•1259999+00	•1514450+Q4 <sup>†</sup>
-•925001C+0C	·1000000+02	•1000000+00	•1239363÷04°
•9500000÷0C	• 000000	•0000000	•2406C69+95
•9570000470	.1000000-01	•1 <u>0</u> 000000+03	.2317059+05
<b>.</b> 9500000+00	.25000C0-01	•4000000 <del>0</del> 2	•2202308+05
<b>.</b> 9501010400	.5000000-01	•2000000÷02	.2046481 *05
•950000C+0C	.800000n-01	•125 <u>10</u> 30+02	•1898476+05
•\$500 <u>0</u> 00+00	.1/00000+00	•1000°00+02	•1816N81÷05
•950000C <del>+</del> 00	<b>.</b> 2¢00000+00	•5000 <u>0000</u> +01	•1517816÷05
•\$5 <u>0</u> 0000+00	•4000000+0A	.2500000+01	•118C929÷05
•95000n0÷00	.6000000÷00	.1666667+01	•9825790+04
<b>₽</b> \$50000€0€	•8¢00000+00	.1250000+01	.8472872+04
•9500000+0¢	•1000000÷01	•1007390+91	•7475235÷04
•9500000000	.2000000+CI	.•5000000+00	•4781524+04
•9500000 <del>+</del> 00	•3000000÷01	•3333333+00	.3542867+04
•\$50 <u>330</u> 0490	.4C000C0+01	•2500030÷00	•282C443÷G4
• 9500000+00	.50000C0+01	• 2000000+00	.2344924÷04
•9500000000	<b>.</b> 8000000+01	·1250000÷00	·1559799÷04
•9500000 <del>4</del> 00	.1000000+02	.1000000+00	•1275892 <b>÷</b> 04

IND STAGES - BCTH REUSABLE---FCRMATION SLINGSHOT\*\*\*PAYLCAD DELIVERY

ISP= 460.0

		LAM8CA	WPL/WS	WS/WFL	CELTAV
		•8000000±0c	•0000000	• 9999000	.1646541+05
		•802000200	•1ccoonn-n1	.1909999403	•1631595+95
		.8000000+00	.2500000-01	•4000000+02	.1609239+05
		.8000000+00	.5000000-01	.2000000+02	.1572904+05
		.80000000+00	.800000c-01	.1250000+02	•153C595+05
		.800000000	.1000000+00	.1000010+02	•1503181+05
		.8000000+00	• 2000000+00	•5020222÷21	•1375572+05
		• 8000000+0C	•40000000+00	•25000009+01	-
		.80000000+00	•4000000+00		.1164597÷05
	ىك ماد ماد			•1666667+Q1	•1002483+05
	***	WISSIAM IMPRISSI	BLE *** K1= 1.006	***	
		.8000000+00	8000000+00	1250000+01	•8767375+04
	***	MICCION INDOCCI	BLE *** K1= 1.022	*152)(mid+01	+0101313+PV#C1C1010+
	2. 8. 4.	WISSIGN IMPESSI	prc *** KI= 1.0022	***	
		80000000400	.1000000+01	1000000+01	.7774753+04
	** ** *		BLE *** K1= 1.962		•1114125***4
-	4.4.4.	F1331CN TMP0331	pre *** VI= 1*105	* * *	•
		. 8000000000	.2000000+01	.5000000+00	•4925511÷04
	***		BLE *** K1= 1.078		•4723311194
_	4.1.4	MISSICK IPPCSSI	CFE 444 KI- 1.010	***	
_		.83900000*00	.30000r0+01	. 3333333+00	.3593247÷C4
	***		BLE *** K1= 1.086		, , , , , , , , , , , , , , , , , , ,
		FIGSICK IFFCSSI	DEC 444 KI- 1.000	-	
		-80000000+00	.4CC00C0+01	2500000+00	.2826317+04
	***		BLE *** K1= 1.092		*2020311104
		THE STEW THE COST	BLL 3444 KI - 18932	******* .	•
		-8000000+01	•5000000+01	.2000010+00	.2328657+04
	***		BLE *** K1= 1.190		*232CC31114
	- •	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	BEE 711 KI- 11170	***	
_		.8000000+00	.8000000+01	.1250000+00	.1523250+04
	***		BLE *** K1= 1.103		01525255.44
		THE STER THE COST	CCC TO KIT ISING	7	·
		.80000000+00	.1000000+92	.1000000+00	•1237726÷04
,		•8252000÷00	• 0000000	.0000000	.1787291+05
		.8250Q0Q±0Q	.1000000 .1000000-01	.1000010+03	.1770022405
		·8259090400	.2500000-01	.4000000000	.1744448+05
		.82500000+00	.5000000-01	.20001700+12	.1792728÷05
		.8250CCC+OC			
			.8000000-01	.1257070+02	.1654186+05
•		.8250000400	.109000000	.1000000+02	.1622762+05
		•8250000÷00	.2000000+00	.50000000+01	·1476958+05
		•8250000+0Q	"4^ <u>C</u> 10C0÷00	.2501010+01	.1238537+05
		.8250C00+0C	.6000000+00	1666667+01	.1058311+75

THU STAGES - BCTH REUSABLE---FORMATICN -SLINGSHOT\*\*\*PAYLCAD DELIVERY

ISP= 460.0

	LAMBCA .	WPL/WS	WS/WPL	DELTAV
***		.5000000+01 BLE *** K1= 1.092	.2000100+00 ***	•2390762+04
* * *	.825000C+OC MISSION IMPCSSIE	.8CC0CCC+01 SLE *** K1= 1.094	•1250990+09 ***	•1560655+04
	.825000C+0C .8500C0C+00	.1000000+02 .000000	.1099090+99 .099990	•1267241+04 •1950362+05
	.8599000+99 .8599000+90 .8599000+00	.100000-01 .250000-01 .500000-01	.1000000+03 .4000000+02 .200000+02	•1930223405 •1900405405 •1851780405
	.85000000+00 .8500000400 .8500000+00	.800000-01 .1000000+00 .2000000+00	.1257700472 .1000000402 .5000700+01	•1795261+05 •1758721+05 •1589932+05
<b>~</b>	.8500.000+00 .8500.00+00 MISSICN IMPCSSIE	.4000000+00 .600000+00 SLE *** KI= 1.015	.2500000+01 .1666667+01	•1317956+05 •1116620+05
水水水	.8500000+00 MISSICN IMPOSSIE	.8CCOCCC+00 BLE *** Kl= 1.027	•125000C+01	•9652855+04
***		.1000000+01 BLE *** Kl= 1.056	.1000000+01 ***	.8486823+04
***		.2000000+01 BLE *** Kl= 1.067		•5262739÷94 <sub>.</sub>
<b>4</b>		.3000000+01 3LE *** K1= 1.073		.3807304+04
* * * *		.4C000C0+01 BLE *** Kl= 1.077	•2501030÷00 ***	•2981654+04
* * *		.5000CC0+C1 BLE *** Kl= 1.083	°5000000+00	*24501C8+04
<b>፞</b> ፞	.8500CCC+OC MISSION IMPOSSIE	.8C0D0000+01 BLE *** Kl= 1.384	.12511111÷11 ***	•1596228÷04

```
.8500000+00
                      -1C00CC0+02
                                          .10000000+00
                                                            ·1295265+04
     .8750000+00
                      .0000000
                                          .0000000
                                                            ·2143986÷05
     .8750000400
                      ·1000000-01
                                          .10000000+03
                                                            ·2120004+05
     ·8750000+00
                      .25000C0-01.
                                          ·40000000+02
                                                            .2084500 ÷05
     .875000C+0C
                      5000000-01
                                          .20000000+02
                                                            ·2026641+05
     .8750000÷00
                      .8000000-01
                                          .1250000+02
                                                            ·1959491÷05
     .87500000+00
                      •1000000÷00
                                          ■10000000+02
                                                            .1916161+05
     •8750000÷0¢
                      • 20000000+00
                                          ·5000000+01
                                                            ·1717296+C5
     .8750000+00
                      •4000000÷00
                                          .2500n0n+r1
                                                            ·1403354+05
*** MISSICH IMPOSSIBLE *** KI= 1.003 ***
     .8753000+00
                      -6000000÷00 .
                                         .1666667+01
                                                            -1177219+05
*** MISSICN IMPCSSIBLE *** KI= 1.018 ***
     .8750C0C+0C
                     •8C000C0+00
                                          .1250000+01
                                                            ·1010765+95
*** MISSICN IMPCSSIBLE *** K1= 1.028 ***
     .875000Q+0C
                      -10000c0+01
                                          .1000000+01
                                                            .8844127+04
*** MISSICN IMPCSSIBLE *** K1= 1.052 ***
```

## THU STAGES - BETH REUSABLE---FORMATION SLINGSHOT\*\*\*PAYLUAU DELIVED:

	LAMBCA	· WPL/WS	kS/WPL	DELTAV
. <b>* \$</b> \$	.875000C+00 MISSICN IMPESSIO	.2000000+01 BLE *** Kl= 1.061	.50000000+00 ***	.5423334+04
***	.8750000+00 MISSICN IMPESSIE	.3000000+01 3LE *** Kl= 1.065	•3333333÷00 ***	.3907455+04
***		.4000000+01 BLE *** Kl= 1.068	==	.3053716+04
***		.5000000+01 . BLE *** K1= 1.072		•2506174÷04
* * *		.8000000+01 BLE *** Kl= 1.074		•1629679+94
	.8750C0C+0C .900000+0C .900000+0C .900000+0C .900000+0C .900000+0C .900000+0C		.100000+00 .0009000 .1000000+03 .400000+02 .200000+02 .1250000+02 .500000+01	•1321580+04 •2381978+05 •2352529+05 •2308944+05 •2237986+05 •2155832+05 •2102984+05 •1862865+05 •1495004+05
	.9000CCC+0C		.1666667+01	•1239585÷05
ř**		.8C00100400 3LE *** K1= 1.028		.1056327+05
存本本	.9000000+00 MISSIGN IMPCSSI	.10000000+01 BLE *** Kl= 1.046	.10000000+01 ***	.9195759+04
* * *	.9000000+0C MISSICN IMPCSSIE	.2009000+01 BLE *** K1= 1.053	.5000000+00 ***	•5575652+04 \
***	.9700000+01 MISSICN IMPOSSI	.3C000C0+01 3LE *** Kl= 1.056	.3333333+00 ***	.4001352+04
本水本		.4000000+01 BLE *** K1= 1.058		•3120913÷04 ·

```
.2000000+00
     .9000000+00 .5000000+01
                                                            .2558293+04
*** MISSICN IMPOSSIBLE *** K1= 1.061 ***
                                          .1250000+00
                                                            .1660639+04
     • 9000 QQC+0 G
                    .8000000+01
*** MISSIGN TYPESSIBLE *** K1= 1.062 ***
                                                             .1345902+04
      +9000000±00
                       .1000000+02
                                          $1000000n+00
      .925000C+00
                                                             .2690282405
                       .0000000
                                          •0000000
      .9250000+0C
                       .1000000-01
                                          ·1000000+03
                                                            .2652310+05
                       .2500000-01
                                          .4000C0C+02
                                                             ·2596137+05
      .9250000+00
                       .5000000-01
                                          ·20000000+02
                                                            .2504860+05
      •92500000+0C
                                                             .2399646+05
      •$251000400
                       .8C00000-01
                                          .1250000+02
                                          .10000000+02
                                                             .2332336+C5
     -.9250000+0C
                       .1000000+00
      .9250000+00
                       .2000000+00
                                          .5000000+01
                                                             .2031777+C5
                                          .2500000+01
                                                             .1592476+05
      .9250000¢00
                       .40000000+00
*** MISSICN IMPOSSIBLE *** KI= 1.012 ***
```

TWO STAGES - BCTH REUSABLE---FCRMATICN SLINGSHOT\*\*\*PAYLOAD CELIVERY

ISP= 460.0.

	LAMBDA	WPL/hS	WS/WPL	DELTAV
<b>\$ \$ \$</b>	.9250000+00 MISSICN IMPCSSIB	.600000+00 LE *** K1= 1.021	•1666667÷01	•1302559+05
***	.9250CCC+OC . MISSIEN IMPESSIBL	.8CC0QC0+00 LE *** K1= 1.027	•1250000+01 ***	.11nc936≄c5
***	.925000C+0C MISSICN IMPCSSIBI	.1000000+01 LE *** K1= 1.039	•1000170+01 ***	•9533431+04
	.9250000+00 MISSICN IMPCSSIBI			•5716514÷04
***	.925000C+00 MISSION IMPCSSIB	.3000000+01 LE *** K1= 1.046	• 3333333+00 ***	•4087223÷94 
* * *	.9250000+0C MISSICN IMPCSSIB			•3182054+04
***	.925000C+0C MISSICN IMPESSIBE		.200000CC+CO ***	•2605578÷C4
<b>李</b> ※ 李	.9250000+00 MISSICN IMPCSSIBI	.8000000+01 LE *** K1= 1.050	•125000C+00 ***	.1688615+94
	.9250000+0C .5500C0C+00 .950000C+00	.1000000+02 .0000000 .1000000-01 .2500000-01	•1000000+00 •0000000 •1000000+03 •4000000+02	.1367850+04 .3127253+05 .3073717+05 .2994615+05
•	.950000000 .9500000+00 .9500000+00 .9500000+00	.5000000-01 .8000000-01 .1000000+00	.2010010+02 .1250000+02 .1000000+02 .5000000+01	.2866625+05 .2720550+05 .2628230+05 .2230137+05
\$ 4 \$	MISSICN IMPESSIBLE			
在非旗	.95000CC+00 MISSICN IMPESSIB	.4CCOCCC+00 LE *** K1= 1.014	.2509090+01 ***	•1693403*05
\$ <b>4 4</b>	.9500COC+0C MISSICN IMPESSIBL	.6000000+00 E *** Kl= 1.019	.1666667÷01 ***	•1363732+15
\$ 4 <i>q</i>	.950000C+00 MISSICN TMPCSSIBI	.8C000C0+00 .E *** K1= 1.023	.125000C+01 ***	.1142804+05

			.10000000÷01	.9843955*04
***	MISSICN IMPCSSIB	LE *** Kl = 1.030	<b>**</b>	
<b>*</b>	.950000C+OC MISSICN IMPESSIB		•5000000C+00	•5841332+04
4- 1- 1-	WILDSTON THI COSTO	FF 444 KI- 14035	7.4.4	
	•95 <b>000</b> 000+00	.3C000C0+01	.3333333+00	·4162529+C4
***	MISSICN IMPCSSIB	LE *** K1= 1.033	***	
	•950000C+00	.4000000+01	.2501010+00	.3235421+04
***	MISSICN IMPESSIBLE	LE *** K1= 1.034	***	
	•95000CC+0C	.5CC0CC0+01	.2000000+00	.2646743+04
***	MISSICN IMPOSSIB	LE *** K1= 1.735	<b>ネ</b> な本	•
	.950CCOC+0C	.8000000÷01	.125000C+00	.1712881+04
***	MISSICN IMPOSSIB	LE *** Kl= 1.036	** <b>*</b>	
	.950 <u>000</u> 000	.1000009+02	.1000000+00	1386867+04

FAU STAGES - BCTH REUSABLE---FORMATION SLINGSHO\*T\*\*\*PAYLOAD RETRIEVAL

LAMBCA	WPL/WS	hS/hPL	DELTAV
.8000000+00	.000000	•conococ	•1646541+75
• 8000 Q0 C+D C	.1000000-01	•1000000+03	.1627483+95
•8010000±00;	·2500000-01	•4000000+02	·160C126+05
<b>.</b> 8930000+49	•500000-01	.21001010+02	·1557463+05
•8010C00+0G	10-0000008.	•1250000+02 T	.1510455÷05
• 8000000e+00	<b>.</b> 1030000+00	•100nnnn+02	·1481311+05
.8010000+00	•20¢00¢00+00	•500030G+01	•1356116±C5
•8000C0C+0C ·	•4000000+00	.25000000401	•1172889+95
•8000000÷00	<b>.</b> 6000000+00	•1666667+01	•1041487+C5
<b>.</b> 8010000÷0€	<b>.</b> 8000000+00	•1250000+01	•9407363+04
•BJJ0CJC+JU	.1000000+01	•1000000÷01	•8601568+C4
• 8ᲡᲥᲣᲦᲘԸ+ᲡᲔ	<b>.</b> 2090000+01	•5000000+00	•6119978 <b>+</b> 94
•8วาดเตก÷คต ·	.3000000+01	.3333333+00	•4798194 <del></del> 04
•8000000+00	<b>.</b> 4000000+01	• 2500/10+00	•3960905±04
<u>.8000000+00</u>	.5000000+01	•2000000÷00	•33784C7+04
<b>.</b> 8小ᲘᲔᲘᲘᲘ+^Ი	<b>.</b> 8040000±01	•1257170+00	.2352734+04
•8ᲐᲡᲘᲘᲡᲘᲐ:0	.1000000+02 ,	•1000000÷00	.1959171+04
• 8250 <u>000</u> ÷00	* მინმპინი	• COBOOO	•1787291+05
•8250000400	-1000000-01	•10C0000+03	•1764313÷05
.825900C+0C	.2500000-01	•400100 <b>0</b> +02	•1731534+05
.8250000±00	.5C00C99-01	<u>. 200</u> 00000+02	.168C868+G5
<u>.825000C+00</u>	.8CC0C00-01 ·	•1250000÷02	.1625621+05
<b>.</b> 8250000∻00	.100000÷00	•1000000+02	.1591647 <b>÷</b> €5
<b>.</b> 8250000+0¢	<b>-20000000</b> +00	•5000000+01	·1447817+05
•8250CCC+GC	•4000000 <del>*</del> 00	.2500000+C1	<b>.</b> 1242346 <b>+</b> 05
•82500CC+OC ~	<b>.</b> 6000000∻00	•1666667÷01	.1097871+05
<u>-</u> 8 25^ <u>0</u> 000+0 €	.8 <b>COOCCC</b> +OO	•125000C÷01	•9884158+04
•825 <u>0000</u> 0÷00	•1000000+01	.10000000401	.9015842÷04
<b>.</b> 8250000÷00	.20000CC+C1	*•5000000+n0	•6374381+04
•825000C∻0C	*3000000+01	.3333333+00	•4983811+04
-825C00C+10	<b>.</b> 4000000401	<b>.</b> 2502000+00	.4107687÷04

TWJ STAGES - BCTH REUSABLE---FORMATION SLINGSHO\*T\*\*\*PAYLCAD RETRIEVAL

ISP= 460.0

LAMECA	WPL/WS	. MS/WPL	DELTAV
-8250 <u>0</u> 000+00	•50000000÷01	•2000000÷00	•3500C68+04
.8250000÷0C	.8000000+01	•1250000÷00	.2433514∻C4
•8250 <u>0</u> 000+00	·1000000+02	•1000000+00	•2025285+04
•850 <u>0</u> ccc+nc	•000000	• 6000000	•1950362+05
.850 <u>0</u> 0000+00	.1000000-01	.1000100+03	•1922052+05
•8500CBC+0C	•2500CCO-01	•4 <u>0</u> 00000+02	<b>.</b> 1882002*05
•850ŋqn@ <b>÷</b> n¢	<b>.</b> 5000000-01	• 2000 000+02	•1820804 <del>*</del> 05
.8500CGC+0C	<b>.</b> 8000000-01	•1250000÷02	•1754948+C5
•8500QC0+0C	.1000000+00	.1000 <u>0</u> 00+02	.1714860±∩5
<b>.</b> 8500000+00	•2¢00000+00	<b>.</b> 5000300∻01	•15481C5+05
•8500C^C+^C	•4000000÷00	•250 <u>1100</u> +11	•1316521+C5
•8500C0C+0C	•600000+00	•1666667+01	.11.57276+95
<b>.</b> 8500000+00	•8¢00000+00	•1250100÷01	.1038209+05
•8500 <u>0</u> 00+00	.1000000+01	.1000C0C+11	<b>.</b> 9445799+04
•8500000 <del>+</del> 00	<b>.</b> 2000000÷01	•50C0G0O+9G	•6634363+04
<ul><li>8500000+00</li></ul>	.30000000001	.3333333+00	1.5172292*04
<b>.</b> 8500000÷00	.4000000÷01	<u>.2500100+00</u>	<b>.</b> 4256211+04
<b>.</b> 8509000+00	.5000CC0+01	•2000000±00	.3622904+04
<b>.</b> 8500000+00	.8000000+01	•1250000÷00	·2514793+04
•8500000÷00	.1C00CC0+02	£1000000+00	•2091725÷04
.8750CC0+0C	•0000000	• 0700700	•2143986÷05
•8750CQQ+0Q	.1c000c0-0i	•100101C±03	•2108965+95
•875QCCC+9C	<b>.</b> 2500000-01	•4 <u>0</u> 00100+02	<b>.</b> 2057826+95
.∙8750000∻00	•5000000-01	·• 2000000÷02	•1982235±05
•875Q00¢÷0¢	<u>-8000000</u> -01	•1250999+02	.1902287+05
•87500000+0C	.1C00CC0+00	•1009700÷02	■1854247÷05
<b>.</b> 8759∩QQ÷QC	•2000000÷00	•5900000¢nl	•16586 <del>5</del> 8+05
•875 CQ^C∻QC	.4000000+00	·2500000+01	•1396n78+n5
<b>.</b> 8759¢¢¢+0¢	•6000000+00	.1666667+01	.1220034405
.875000G+0C	•8¢000c0÷00	.1257000+01	•1090307+05
•8750000÷00	.10000000+01	•1000000÷01	.9892628+04

T#J STAGES - BCTH REUSABLE---FORMATICA SLINGSHO \*T\*\*\*PAYLOAD RETRIEVAL

ISP= 460.0

LAMBDA	MPL/WS	WS/WPL	DELTAV
.875000C+0C	.20000000+01	•50C0100÷00	•6900160+04
.8750CCC+9C	.3000000÷01	.333333400	•5363721+04
.875000C+0C	.4CC00000+01	.2500000+00	•4406521÷C4
.8759000÷00	.5CC00000+01	.2000300+00	•3746938+94
.8750000+00	.8CCOΩCO+01	•1250000÷00	•2596575+04
•8750000°÷0¢	.1000000÷02	.1000000÷00	.2158497+04
•9000000;+00	•000000	.000000	•2381978+05
•9000000000	.1000000-01	.1000000+03	•2334425+05
,9000000+0C	•2500 CC0-01	.4000000+02	·2269026÷05
•9000000+0C	-5000000-01	• 2000000+0 2	·2172748+05
•9000000400	<b>.</b> 8000000-01	·1251000+02	.2073297+C5
•9000000+00	•1000000±00	.1000000+02	·2014555+05
• 3000000400	•500JJCO+00	•5000000+01	.1781887+05
• \$600,000 + 00	•4101010+10	.2500000+C1	·1481838+05
• 9000000+00	<b>.</b> 600000±00	. • 1666667÷n1	·1286533+05
*400000040C	.8000000+00	•1250000+01	-1144924+05
•9000000+0e	.10000c0+01	•1000000÷01	·1035766+05
• 9000000 +00	•20000CO+01	.5000000+00	.7172031÷04
•\$000000;÷0 <b>0</b>	10+000000	.3333333+00	•5558189÷04
• 300000000000	. •4000000+01	• 2500000+00	•4558658 <b></b> ≉04
• 90000000+00	.5000CC0+01	.2000000+00	·3872190+04
•3000000+00	•8¢00¢00÷01	•1250000+00	•2678867÷04
•9000000000	.1C00CCO+02	<b>℃100</b> 00000+00	·2225606÷04
•9250000+nc	•0000000	.000000	.2690282+05
.9250000+00	.1000000-01	.1000,000+03	.2623032+05
•9250000+nc	.25000C0-01	•40000000+02	·2533000+05
•\$25000@÷00	.5000000-01	•2000000+02	•2404796÷C5
•9250000+00	.8000000-01	• <u>,</u> 1250000+02	·2276805÷05
•9250000+00	.1000000+00	*j000000+05	.2202981+05
•9250000+0C	.2000/00÷00	•5000000+01	·1920835+05
•925000C+0C	•4C000C0+DO	<pre>.2500000+01</pre>	•1574823∻ <u>0</u> 5

THO STAGES - BCTH REUSABLE---FCRMATICN SLINGSHO\*T\*\*\*PAYLCAD RETRIEVAL

ISP= 460.0

LAMBCA	WPL/WS	WS/WPL	DELTAV
•9250000+00	.600000+00	.1666667+01	•1357235+05
- <b>.</b> 9250000+00	.8030000+00	.1250000+01	.1202311+05
.9250000+0C	.1000000+01	.1000000+01	.1084240+05
•9250000+0¢	.2000000÷01	•5000000 <b>+</b> 00	.7450247+04
.9250000÷00	.3000000+01	•3333333+C0	•5755789÷04
•9250000+0C	.4G00000÷01	.2500000+00	•4712663+04
•9250000±00	.5000000+01	.2000000+00	·3998686+04
•925000 <u>0</u> +00	.8CC00000÷01	.1250000+00	.2761677+04
•9250000+0C	.1000000+02	.1000000+00	·2293050÷04
•9500000+0C	.0000000	•0000000	.3127253+05
•9500000±00	.1000000-01	.1000000+03	•3020342±05
•9501000÷10	-2500000-01	.4909090+92	·2884201÷05
.9500000toc	.5000000-01	.2000000+02	.2701031+05
•9500001÷00	.8000009-01	.1250000+02	·2527738÷05
•95000000400	.1000000400	•1000000+02	·2431245+G5
•9500000+00	.2000000÷00	.5000000+01	•2080083+05
•95000000+00	•4000000÷00	.2500000+01	.1676337+05
•9500000÷0C	.6000000+00	.1666667÷01	·1432695+05
•9500000+00	<b>~8000000+00</b>	.1250000+01	•1262754+95
•9500006÷00	.100000÷01	.1000000+01	•1134853÷95
•9500C00+00	.2000000+01	•5000000+00	•7735101+04
•9500C00+9C	.3000000+01	.3333333+00	•5956621+04
•9500CAC+0C	.4000000+01	·2509990+99	•4868582 <b>+</b> 04
•9500000¢0C	.5000000+01	2000000+00	·4126448+04
•9500000400	.8000000÷01	·1250000+00	.28450C7+Q4
<b>.</b> 9500000400	.1900000+02	.10000000+00	.2360836+04

THO STAGES - BOTH REUSABLE---FORMATION SLINGSHOT\*\*\*\*RCUNCTRIP .

ISP= 460.0

LAMBCA	WPL/WS	WS/WPL	DELTAV
.8ñnacna+oc	.0000000	.0000000	•1646541÷C5
_80000000+00	.1000000-01	.10000001+03	•1612950÷05
30+000000+00	.2500000-01	•4000000+02	•1565775÷05
.8000000÷00	•500000 <del>-</del> 01	.2001100+02	.1494522+05
<b>,8000000+00</b>	.8000000-01	.1250090+02	.1419055+05
<u>~~</u> `8009C00+00	.1000000+00	.1000000÷02	•1373763 <del>+</del> 05
.8^ <u>0</u> 00000000000000000000000000000000000	•2000000+00	•50 <u>0</u> 00000401	•1190989+75
.80000000+00	4000000+00	.2500000+01	•9533382+04
\$000000+00	<b>.</b> 6000000+00	.1666667+01	•8015584+04
<b>3</b> C+303C098•	<b>.</b> 8000000+00	.1250000+01	•6945204+04
.8000000+00	.1G000C0+01	.10000000+01	•6143033÷04
- • 800000000000000000000000000000000000	.2000000 <del>+</del> 01	<b>.</b> 5000000+00	<b>.</b> 3946425 <b>*</b> 04
,8000CCC+9C	.3000000001	.3333333+00	•2929948 <b></b> ₹04
,84000000+0¢	.4000000+01	.25000000+00	•2336393+04
.8000000+00	•5CCO000+CI	.2000000+00	•1945297÷04
<b>.</b> 8000000+0C	•8¢00000+01	.1250000+00	.1298212+04
•80100001÷00	•1000000 <del>+</del> 02	.1000790÷00	•1063470+C4
.8250C1C40C	.ccoogca	.000000	• <b>17</b> 87292÷05
<b>.</b> 8250000+00	.1 <i>C</i> 200007-01	.1000000+03	.1747693+05
.8250000+00	2500000-01	<b>.</b> 40000000+02	<u> </u>
.8250000 <del>4</del> 00	.500000-01	•2000000÷02	•1609909÷05
<b>.</b> 82500∩0∻0€	<b>.</b> 8¢00000-01	•1250 <u>000</u> 00	<b>.</b> 1523421∻?5
.8250000+00	.1000000+00	•10000010÷02	•1471949÷05
•8250000+00	.2000000÷00	•50C0900÷01	.1267089+05
.8250000+0C	•400000+00	•25000000+01	•1006301÷05
.8250000400	•60007C0÷00	.1666667+01	•8423585 <del>+</del> 04
.8250000¢0C	•8000000÷00	•1250000÷01	•7277641÷04
<b>.</b> 825000040€	•1000000+31	•1000000±01	•6423797÷04
•8250000 <del>+</del> 00	<b>.</b> 20000000401	<b>`</b> .5000000+00	.4105033+C4
•8250000÷0€	-30000CO+01	.3333333+00	<ul><li>3040692÷04</li></ul>
.82500 <u>0</u> 0+00	.4C000C0+01	.2500000+CO	•2421520÷04

## TWO STAGES - BOTH REUSABLE---FORMATION SLINGSHGT\*\*\*\*RCUNDTRIP ISP= 460.0

LAMBCA	WPL/WS	WS/WPL	CELTAV
•8250000+0C	•5000000÷01	. 2000000+00	•2014451+04
.8250000+00	.8000000+01	.1250200+00	.1342485+04
.8250Q0Q÷0Q	•1000000+02	.1000300+00	.1099183+04
.8500000÷00	0000000	•0002020	.1950362+05
.8500C0C+0C	.1000000-01	`.1001000÷03	. 1902783+05
.8501000+00	.2500000-01	·4000000+02	.1837370+05
•8500000±00	.500000-01	.2000000÷02	.1740025+05
•850000n+00	.800000-01	.1250000+02	.1639786+05
<b></b> 8500000+00	.1c00000+00	.1002000+02	.1580741+05
<b>.</b> 8509099+09	•2000000+00	•5000000+01	<b>.</b> 1349577+05
.8500CQC+90	•4009090+90	.250000C+01°	.1062413+05
.85000009+0C	•6000000+00	.1666667+01	·8850583+04
.8500000÷00	.8000000000	.1250000+01	<b>.7</b> 622868 <b>+</b> 04
•8500000÷00	.1000000+01	.1000000+01	.6713791404
•850000 <u>0</u> 1+00	.2000000+01	•5000000+00	•42666 <del>9</del> 9+04
.8500000+00	.3000000+01	.3333333+00	*3152958*04
•850000C+OC	.4000000÷01	2500000+00	.2507559÷C4
•8500000+0¢	•5000C00+01	•2 <u>000000</u> 0+00	•2084214+C4
.8501000+00	.8000000+01	.125000C÷00	•1387010÷04
<b>₽</b> 85000000+0€	.1000000÷02	.1000100÷00	.1135063+04
.8750000±00	.0000000	•0000010	.2143986+C5
.8750 <u>000+0</u> 0	.1000000-01	•1000000+03	.2085301+05
.8750000+00	-2500000-01	•4000000+02	.2005291405
.875000C+00	•5000000 <del>-</del> 01	.2000000÷02	.1889100÷95
•8750000¢00	.8990900-01	.1250000+02	•1771222+05
.8750CQA+QQ	·1000000+00	.1000n00÷02	.1702679+05
•8750000+00	•2000000+C0	. <b>.</b> 50000000÷01	.1439630+05
•8750000+00	.4000000+00	.25000000+01	•1122080±05
.8750000+00	•6000000+00	1666667∻01	•9298498+94
•87500CC+00	<b>.</b> 8000000+90	.125909C÷01	•7981948+74
•8750900+00	.1000000+01	.1000000+01	.7013667+04

TWO STAGES - BOTH REUSABLE---FORMATION SLINGSHOT\*\*\*\*RGUNDTRIP

LAMBĈA	WPL/WS	WS/WPL	DELTAV
CAL OTH	HI LI NS	N3/ W. C	DELIAT
.875000C+0C	•2000000+01	.5000000÷00	.4431550+04
.8750202+00	•3000000+01	.333333*00	.3266791+04
\$87500CC+0C	.4c000c0+01	.2500°0°+°0	.2594531+04
.8750000+00	•5000000÷01	.20000000+00	-2154596+04
•8750000+00	-8000000+01	•1250000+00	•1431793+G4
•875000 <u>0</u> +00	.1000000÷02	.F001000+00	.11711111+04
•9010299+00	•000000	• 0000000	·2381979+05
•9000000+00	*100000-01	1000000+03	•2306799+05
•300000000	.2500000-01	•4000000÷02	·2296205+05
\$9000000+0C	.5000000-01	•2000000+02	•2063499÷95
<b>.</b> 9000000+0C	.8000000-01	.1250000+02	•1922171+05
.90000000+00	•1000000÷00	.1000000+02	•1841357÷05
• 3000,000400	•2003000+00	•5000000+01	.1538793+05
• \$100000÷00	<b>.</b> 4¢600c0+00	.2503030+01	•1185800÷05
	<b>-</b> 6000000+00	.1666667+01	.9769573+04
•9997 <u>0</u> 00+00	.800000000	.1250000+01	•8356 <u>092</u> +04
, •860000000+0C	•1¢00¢¢0+01	.10000000+01	•7324157±04·
.9000000+00	•2000000+01	•5000000+00	.4599718+04
.90100000400	.3000000+01	.3333333+00	•3382238÷04
• 300 0 0 0 0 0 0	.4000000+01	.2500000+00	-2682457+94
	.5000000+01	.20000C0÷00	-22256C8÷04
• 9 0 0 0 0 0 0 0 + 0 0	.8000000+01	.1250000+00	.1476835+04
•9000000+00	.1000000+02	.10000000+00	•1207328÷04
•9250000+00	.0000000	•0000000.	.2690283+05
•9250000+0C	.10000C0-01	.1000000+03	·2588084+05
•9250000÷00	.25000C0-01	.4001300+02	·2455333÷05
.9250000+00	.5000000-01	.20000001+02	.2273478+05
•9250000+0G	.8CC00C0-01	.1250 <u>0</u> 00÷02	2099413+95
.9250000÷00	.1000000+00	.1000000+02	•2002112÷05
***•9250000+00	•2000000÷00	.50000000+01	.1649164+95
•9250000+00	•4CGDOCA+QO	.2500000+01	.1254187+05

TWC STAGES - BOTH RELSABLE---FORMATION SLINGSHOT\*\*\*\*RCUNDTRIP

- LAMBCA	WPL/WS	WS/WPL	CELTAV
•925000C+0C	.6000000+00	.1666667+01	•1026646+05
•9250000÷00	•8000000+00	•1250000+01	.8746686+C4
•\$250000+00	.1000000+01	•1000000+01	.7646978+04
•925000C+0C	.2000000+01	•5000000+00	•4771345+C4
•9250000+00	•3000000+01	•3333333+00	.3499346+04
.9250CCC+0C	•4000000+01	• 2500 000+00	.2771359+04
•9250 <u>0</u> 00÷00	•5000CCQ+01	•200000c+00	.2297263+04
•9250000÷00	•8000000÷01	1250000+00	•1522141+04
•92500∩C÷0C	•1000000÷02	.1007000+00	·1243716+04
•95000000400	•000000	• 0000000	•3127254+05
• 95000000+00	<b>.</b> 1000009-01	•1000000+03	·2972837+05
•9500000 <del>+</del> 00	<pre>-2500000-01</pre>	•40 <u>0</u> 9000+02	•2782818⊀05
•950000C+0C	•5000CCO-01	•20000000+02	•2537233+05
•9500000+00	<b>.</b> 800000-01	•1250100+02	•2314134+C5
•9500000+00	•10000â0+00	<b>.10000000+02</b>	.2193427+05
<b>.</b> 9500000+00	•2000 <u>00</u> 00+00	•5000000+01	•1773702+05
<b>.</b> 95∩ฉฺฅาก+ค.c	<b>.</b> 4000000+00	•2500 <u>000</u> 01	·1328019÷05
•9500000+00	•6000000+00	.1666667+C1	.1079231+05
.950000C+OC	•8000000+00	•1250000+01	•9155328+04
<b>~</b> 95000000+0C	•10000CO+01	.1000000+01	•7980353+C4
<b>.</b> 9598696+09	<pre>.2000000+01</pre>	•5000000+00	.4946585+04
•9500000+00	.3000000+01	.3333333+00	•3618166+04
.9500000£0 <b>0</b>	.400000+01	.2590000+00	•2861259±04
•95000000+00	•5000000÷01	•2000000÷00	.2369572+04
•9500000+00	<b>.</b> 800000401	•1257000+07	•1567712÷ <sup>9</sup> 4
•9501 <u>000</u> +00	•1C00Q00+02	•1000000+00	.1280278+04

TAU STAGES - BCTH REUSABLE---REFUELED, SLINGSHOT\*\*\*\*PAYLCAD CELIVERY

ISP= 460.0

	LAMBCA	WPL	./WS	hS/WPL .	DELTAV
	•800000040	000000	c	• 0000000	.1961786+15
	•80000000+0	0 .100000	0-01	.1000000+03	.1949444+05
	•8000¢0¢+¢	0 .250000	0-01	.4000000+02	·1931C90+05
	.8011000+0	0 .500000	0-01	.20000000+02	.1900931+05
	<b>.</b> 800000€40€	000008.	0-01	.1250000+02	- 1865468+05
	•8009900+0	0 .100000	0+00	.1007000+02	.1842275+05
	<b>.</b> 8000000+0	0 .200000	0+00	•500000C+01	.1731783+05
	•80000000+0	0 .400000	ነሳ+ባሳ	.2501010+C1	.1537929+95
	.80000000+1	0 .600000	0+00	.1666667+01	.1377114+05
-	•81000001+0	0.800000	0+00	.1250700+01	•1243854+05
	•8000000040	0 .100000	0+01	.10000000+01	•11327C5+05
***	MISSIEN IMP	CSSIBLE *** K	2= 1.021	***	
	800000¢÷0	0 .200000	0+01	•5000000+00	•7794628+04
***	MISSICN IND	OSSIBLE *** K	2= 1.048	***	•
	· T			•	
	•8000000040			.3333333.+00	<b>.</b> 5936103+04
* ***	MISSICH IMP	CSSIBLE *** K	.2 = 1.063	オポホ	. •
				•	
	•800000d+0		· · · ·	.2500000+00	.4794091+04
* * * *	MISSICN IMP	CSSIBLE *** K	2= 1.073	<b>*</b> **	
	1				
	•820266642			.2000000+00	.4021303+04
***	MISSICH IMP	CSSIBLE *** K	2= 1.088	***	
	22222			1050000.00	0711750.44
	.80000000401			.1250000+00	.2711752+04
软软块	412210N 1Wh	OSSIBLE *** K	2= 1.093	XEX	
	0000000	r 100000	0400	1000000400	.2228420+04
	.80000000+1 .8250000+1			.1000000+00 \.0000000	•2120676+05
	•8250000¢0	·		.1000000	•2106627÷05
	•8250007±0	· · · · · · · · · · · · · · · · · · ·		.4000000+02	·2185734+95
	•825000C+0			.2000000+02	•2051494+05
	•8250000+0			•1250770÷02	•2021404403 •2011043+05
			_		
	.8250000+0			.10000000+02 .50000000+01	•1984656*^5 •1859137+^5
	. •8250000+0			.2500000+01	.1640288*05
	. *825900°Q*0			.1666667+01	.146(699+05
	.825006Q+0				
	.8250000+0			.1250300+01 .1000000+01	1313493÷05 .1191878÷05
ofe she was					01171010410
***	WI22IOK İMP	CSSIBLE *** K	Z= 1.025	44 A	

.825000C+0C .2000000+01 .5000000+00 .812C147+04

\*\*\* MISSICN IMPOSSIBLE \*\*\* K2= 1.048 \*\*\*

.8250000+00 .30000C0+01 .3333333+00 .6156690+04

\*\*\* MISSICN IMPOSSIBLE \*\*\* K2= 1.061 \*\*\*

.825000C+0C .40000C0+01 .25000CC+C0 .496CC49+04

\*\*\* MISSICN IMPOSSIBLE \*\*\* K2= 1.069 \*\*\*

THU STAGES - BETH REUSABLE --- REFUELED SLINGSHOT \*\*\*\* PAYLOAD DELIVERY

ISP= 460.0

		•		
	LAMBCA	WPL/WS	WS/WPL	DELTAV
* * *		.5000000+01 BLE *** K2= 1.081	.20000000+00 ***	•4154039+94
***	.8250000+00 MISSICN IMPOSSI	.8000000÷01 3LE *** K2= 1.086	•1250000+00 ***	.2794372+04
٠	.8250CCC+0C .850000C+0C .850000C+0C .850000C+0C .850000C+0C .850000C+0C .8500COC+0C .8500COC+0C	.100000+02 .000000 .100000-01 .2500000-01 .500000-01 .800000-01 .100000+00 .200000+00 .400000+00	.100000+00 .0000700 .1000000+03 .4000000+02 .2000000+02 .1250000+02 .1000000+02 .5000000+01 .2500000+01	•2294345+04 •2303144+05 •2286927+05 •2262809+05 •2223183+05 •2176610+05 •2146176+05 •2001725+05 •1752016+05 •1550023+05
***	.8500001+00 .8500000+00 MISSICN IMPCSSI	.8000000+00 .1000000+01 BLE *** K2= 1.027	.1250000+01 .1000000+01	•1386706+05 •1253322+05
- ***	.8500GCC+OC MISSION IMPCSSI	.2000000+01 BLE *** K2= 1.047	.50000000+00 ***	.8448067+04
* \$ \$		.3000000+01 BLE *** K2= 1.057		•6376479÷04
***	.850000C+0C MISSION IMPCSSI	.4000000+01 BLE *** K2= 1.064	.2500000÷60 ***	.5124517+04
* <b>*</b>		.5000000+01 BLE *** K2= 1.074		•4285165÷04
***	• 0 20 0 0 0 0 0 0	.8000000+01 BLE *** K2= 1.078		.2875611÷04

```
.85000C0+0C
                       .1C00CC0+02
                                            £10000000+00
                                                              .2359070+C4
     .8750C00+00
                                                              .2517629+C5
                       .0000000
                                            •0000000
     .8750000+0C
                       .10000cc-01
                                            .10000000+03
                                                              .2498542+05
     --8750000+00
                       .2500000-01
                                            .40000000+02
                                                              .247C153+95
     .875(000+00
                       .5000000-01
                                            •200000000±02
                                                              .2423515+C5
     .87500000+00
                       .8C000C0-01
                                            .1250000+02
                                                              .2368731+95
     .8750000+00
                       .1000000+00
                                            .10000000+02
                                                              ·2332960+05
     .8750CCC+0C
                       .2000CC0+00
                                            .5000100÷01
                                                              .2163734+05
     .8750000÷00
                       •40000<u>00</u>+00
                                            ·2500000+01
                                                              .1874800+05
     .8750CCC+00
                       .6000000+20
                                            ·1666667*01
                                                              .1645613+05
                                            .125000C+01
     .8750000+0¢
                       •8603000+00
                                                              .1463539+C5
                       .1000000+01
     . 8750000+00
                                            .10000000+01
                                                              .1316899÷05
*** MISSICN IMPESSIBLE *** K2= 1.029 ***
      .8750000±00
                       .2000000+01
                                            •5000000+00
                                                               .8776598+04
*** MISSICN IMPESSIBLE *** K2= 1.044 ***
      -87500CC+0C
                       .3C00CC0+01
                                            ·2333333+(0
                                                              ·6594324+04
*** MISSICN IMPCSSIBLE *** K2= 1.053 ***
      .8750000+00
                       .40000C0+01
                                            .2500000+C0
                                                              .5286701+04
*** MISSICN IMPOSSIBLE *** K2= 1.058 ***
      .87500CC+00
                                           .. 20000000+00
                       .5C000C0+01
                                                              ·4414088+04
*** MISSICN IMPOSSIBLE *** K2= 1.066 ***
      .8750000+00
                                            .1250000+00
                       .8CC00CO+01
                                                              -2955147 +04
*** MISSICN IPPCSSIBLE *** K2= 1.069 ***
     •8750C0C+0C
                       •1 COOCCO+02
                                            .1000000+00
                                                              ·2422351+C4
     •9000000400
                       .00000000
                                                              .27782C7+05
                                            •00000000
     ~9000000±00
                       -1000000-01
                                            .10000000+03
                                                              •2755086+05
     •9000000400
                       .25000C0-01
                                            .4000000÷02
                                                              .2720695+05
     •90000000+00
                       .5000000-nl
                                            ~20000000+02
                                                              .2664211+05
     •90000000400
                                                              .2597926 + ^ 5
                       • 80000000-01.
                                            .1250000+02
     .900000040¢
                       .1000000+00
                                            .1000^00+02
                                                              25547C7∻05
     .9000000+00
                       -20000000±00
                                            .50000000+01
                                                              .2351327+05
     •90000000÷0C
                       .4000000+00
                                            .2500000+01
                                                              •2010626+05
     •90000000+00
                       .60000000+00
                                                              .1747818+05
                                            •1666667*01
     •9000000+00
                       •80000CD+00
                                            .1250000+01
                                                              .1543785 < 05
     .90000000+00
                       .10000C0+C1
                                            .1000000000€01
                                                              •1382243<</p>
↑5
*** MISSICN IMPCSSIBLE *** K2= 1.029 ***
     .90000000€00
                       .2000000+01
                                            .5000000+00
                                                              ~9103154 *04
*** MISSICN IMPCSSIBLE *** K2= 1.041 ***
     -9000C0C+00
                       .30000C0+C1
                                            .3333333+00
                                                              .6808686+04
*** MISSICN IMPOSSIBLE *** K2= 1.047 ***
     .9000C0C+0C
                       .4C000C0+01
                                            .25000CC+00
                                                              *5445558+04
*** MISSICN IMPOSSIBLE *** K2= 1.051 ***
```

```
.20000000÷00
     •90000000+0C
                    .5C00C00+01
                                                             .454CC40+04
*** MISSICN IPPCSSIBLE ***. K2= 1.05? ***
     ·90000000+00
                                           .1257000÷00
                      .8C000000+01
                                                             .3032564+C4
*** PISSION IPPCSSIBLE *** K2= 1.059 ***
                                                             .2483876+04
     ■9000000+00
                      .1C000C0+02
                                           .10030C0+00
                                                             .3411166+C5
    9250000*00
                      .0000000
                                           •0000000
                                                             .3081831+05
                      .1000000-01
                                           .10000000+03
     •9250000+00
                      .25000C0-01
                                                             .3038200+C5
     .92510000+00
                                           •4900999+92
                                           .2000000+02
     .9250000+0C
                      .5000C00-01
                                                             .2966588+05
                                                             .2882711 ÷05
     •925000C+0C
                      .8000000-01
                                           ·1250000+02
     ·9250000+00
                      .1C00C0G+00
                                           .1000000+02
                                                             .2828169405
     •9250000+0C
                      .2000000+0n
                                           .50000000+01
                                                             .2573989+05
     •9250000+0C
                      .4000000+00
                                           ·2500000+01
                                                             .2161537+05
```

TWO STAGES - BCTH REUSABLE---REFUELED SLINGSHOT\*\*\*\*PAYLCAD DELIVERY

ISP= 460.0

• •	LAMBDA	WPL/WS	WS/WPL	DELTAV
_	•92500nn+0C	•600000c+n0	.1666667+01 .1257000+01	.1856432+05
•	•9250000±00	<b>∙</b> 80000C0∻∘0	•1257 <u>000</u> +01	.1626712+05
林林林	MISSICN IMPOSSIB	LE *** K2= 1.005	***	
		·1000000+01		.1448581+C5
***	MISSICN IMPESSIE	ILE *** K2= 1.027	*** .	-
		.200000n+01		.9423508+04
***	MISSICN IMPOSSIB	LE *** K2= 1.035	***	
	•925000C+0C	.3CC00C0+01	.3333333+00	.7017415+04
***	MISSIGN IMPOSSIE	LE *** K2= 1.039	***	
	•925000C+OC	•4C000C0+01	•2500000+00°	•5599663÷04
\$c \$c \$c\$	MISSICN IMPOSSIE	LE *** K2= 1.042	<b>*</b>	ı
		.5000CC0+01		.4661975+04
**	MISSICN IMPOSSIE	LE *** K2= 1.046	<b>*</b>	
	•925000°÷0°	.8C000C0+01	.1250000+00	•3107304+C4
***	MISSICN TEPCSSIE	LE *** K2= 1.047	***	
•	•9250000+0C	.1000000+02	•1007700+07	•2543221+C4
	•95 <u>00000</u> 400	#C0000C0	•000000	•3575322+C5
	•9500000+00	-10000CO-01	.1000000+03	•3534779÷05
	.9500000+00	•25000C0-01	<b>:</b> 4001000+02	.3474496 ÷C5
	* 2 DO O O C & G C	•500000 <del>-</del> 01	.20000000+02	•3375 <b>7</b> 28÷15
	•9500000+00	•8000000-01	•1250000+02	•3260600+05
		.1000000÷00	•1000099÷92	.3186213∻C5
	• 9500000400	• 2000 C00+00	<b>.</b> 5000000401	.2846820+95
	•9500000400	<u>.4000000+00</u>	•25000000÷01	.2328429+05
	<b>.</b> 9500000+00	<b>\6001000+00</b>	•1666667÷91	•1969719÷75
***	MISSICH IMPOSSIO	BLE *** K2= 1.004	***	
		.8000000+00		.1710476÷C5
***	MISSICN IMPOSSIE	SLE *** K2= 1.010	, \$**	
			.1000000401	1514368+05
***	MISSION IMPOSSIE	LE *** K2= 1.023	<b>ネ</b> ネ タ	-

***	.950C000+00 MISSICN IMPCSSIBL		•50000000+00 ***	•9732946÷04
<b>\$</b> \$ \$	.950000C+00 MISSICN IMPCSSIBL		•3333333+00 ***	.7217321+04
* * *	.95000CC+00 MISSIGN IMPCSSIBL		•2500000+00 ***	•5746926+04
	.9500000+00	.5C00C00+01	·2009000+00	.4778366+04
***	MISSICN IMPOSSIBL	E *** K2= 1.034	***	
***	.950000C+0C MISSICN IMPCSSIBL		•125000G+00 ***	•3178546÷C4
	•9500000+nc	.1000060+02	.1000000+00	.2599767+04

TWO STAGES - BCTH RELSAELE---REFUELED SLINGSHCT\*\*\*\*\*PAYLCAD RETRIEVAL

ISP= 460.0

LAMBCA .	WPL/#S	. WS/WPL	DELTAV
•800000c+0C	•000000	•0000000	•1961786+75
<b>60000000+00</b>	·1000000-01	.1000090±03	.1938528+05
•8000000+00	.25000C0-01	•4000000+02	.1905278+05
.80000000+00	•5000000-01	.2000000+02	.1853728+05
•8000000 <del>4</del> 00	.8000000-01	.1250000+02	•17973 <sup>0</sup> 9+05
.800000C+0C	.1c0n0c0+00	.1000000+02	•1762512+05
_ <b>.</b> 3000000400	•2000000¢00	•5000000+01	•1614369+05
_00+0000008s	.4000000+00	25000000+01	·1400388+05
,8000000400	.600000+00	•1666667+01	<ul><li>1248147+95,</li></ul>
<b>"</b> 8∿∿∿0°C+0°C	•8000000÷00	•1250000+01	·1131707+05
,80000000+00	.1000000+01	.1000070+01	•1038582+05
~80J000C+0C	.2000000+01	•500000C+00	.7503884+04
.8000000¢00	.3070700 <del>+</del> 01	.3333333+00	•5949541+04
•8000000+00	<b>.</b> 4000000+01	.2503900+00	•4953188+94
•8000000¢0¢	.5000C00+01	.2000000+00	4252955+04
•8939000+00	.8000000+01	.1250000+00	•3001983+04
•80000000+00	.1c000c0+02	•1303030+60	<b>-2514543+04</b>
•8250CCC+00	,.000000	•000000	.2120676+05
•825000C <del>+</del> 00	:10000nn-01	.10000000±03	<b>2092860+05</b>
•82500nr+nr	.2500000-01	•4000010+02	.2053361∔05
•825000C÷00	•5C00C00-01	.2000000+02	<b>.</b> 1992686+05
<ul><li>825€€90+0€</li></ul>	•8000000-01	•125000C+02	<b>.</b> 1926995+05
•825000¢÷0¢	•1000000÷00	£1000000+02	.1886815+05
. 8250 C∩C+nG	•2000000÷00	·.5007000÷01	•1718224÷05
<b>.</b> 8250℃00+00	.40000C0+00	.2509900+91	.1480355∻C5
•8250000÷0¢	.6000000+00	•1666667÷01	•1314225÷05
•8250¢0Q+0Q	•8000000÷00	•125000C+01	.1188544 + C5
.8250000+00	.1030000+01	.1000000+01	.1088755+05
•825000 C+0°C	·20000CO+01	•50C2QQQ+00	.7832036+04
•8250CCC+0C	.3000000+01	.3333333+00	•6199759±04
•8250 <u>0</u> 00+00	.4C00000+01	•2500100÷00	•5157629÷04

ISP= 460.0

LAMBCA	WPL/WS	WS/WPL	DELTAV
.8257000400	.50000n0÷01	•2000000÷00	.4426754+04
•8250000÷00	.8000000÷01	•1257000+00	.3123379+04
•8259CCC+0C	·1000000+02	•1000000+00	·2616C92+04
<b>.</b> 859900040C	•000000	<b>"ცეიიიე</b> ც	.2303144+05
•850000C+00	.1000000-01	•1000@n0∻n3	•2269186+05
•8500000÷00	•2500000-01	•4000000+02	.2221385+05
•85 <u>00000</u> +00	•5000000 <del>-</del> 01	•2000000÷02	·2148832±05
.85000000÷00	.8C000C0-C1	•1250000+02	.2071343+05
•8500000+0C	.1000 <b>0</b> 00÷00	•1000000+02	.2024433+05
.8500C0C+00	•2000000÷00	<b>.</b> 5000000+01	•1831001+05
•8500000+0C	•400000n+00	•25000000+01	<ul><li>1565422+05</li></ul>
•8500000÷00	.600000+00	•1666667+01	.1383768+05
•8500000;+00	.8000000÷00	•1250000*01	•1247974÷C5
<ul><li>8500000+00</li></ul>	•1000000+01	•1000000÷01	.114C997÷05
•8500CCC+00	-200000n÷01	•5000000c+00	<b>√</b> 8170902+04
•8500000¢+00	.3000000+01	.2333333÷CC	•6457685 <del>*</del> 14
•85000000+00	<b>.</b> 4600000+01	•250000C÷00	•5368322÷04
<b>"</b> 85∩∩ŋ∩Ŋ∻∩Ը	.5000000+01°	•2000000±00	.46r5918÷14
•850000C+00	.8000000+01	•1259900÷00	<ul><li>32487C3+04</li></ul>
<b>-</b> 850000€00	<b>"1</b> 000000+02	•1000 <u>000+00</u>	.2721021÷04
.8750nnQ+n0	•0000000	• 0000120	.2517629+05
<b>.</b> 8750000¢0¢	.1000000-01	_ <b>-</b> 10000000+03 .	· •2474987÷05
•875000C+0C	·25C1000-01	•40000000+02	.2415679+05
•87500 <u>0</u> 0∻00	.5C00CC0-01	- <b>.</b> 2000000+02	.2327093*05
•8750C9C∻00	.8000C00-01	•1250100÷02	.2234136+05
•8750000+00	.1000000400	.1000000÷02	•2178593+Q5
•8750000±00	•2000000÷00	•50000000÷01	<b>.1954388+</b> 05
•8750000+00	•4000000÷00	•2500000÷01	•1656257+05
•875000°Q+00	<b>.</b> 6€00000400	•1666667÷01°	•1457176÷05
•8750000÷00	.8C00000÷00	•1250000+01	·1310273÷95
•8750000,∻00	.1000000+01	.1000000±01	.1195521+05

THO STAGES - BCTH REUSABLE --- REFUELED SLINGSHOT \*\* \*\* PAYLOAD RETRIEVAL

1	•		
LAMBCA	· WPL/WS	ASVAL	DELTAV
8750C0C+0C	.2000000+01	•5000000+0n	.8521683+04
•875000C+0C	.3000000+01	<ul><li>3333333*00</li></ul>	•6724302+94
•875000C+0C	.4000000+01	<b>250</b> 00000+00	.5586139+04
•8750000+00	.5000000+01	•2000000+00	.4791243+04
•8750000+00	•8000000÷01	.•1250000 <b>∻</b> 00	•3378591+04
<b>.</b> 8750000+00	.1000000+02	• 1000000÷00	.2829896+94
• ᲛᲘᲘᲬᲜᲛᲔ;+ᲘᲬ	•000000	• 0000000	•27782C8÷05
•9000000+00	.1000000-01	£0+000000±03	.2722438+05
.900000C+0C	<pre>.25000C0-01</pre>	•4 <b>/</b> 01000002	·2646220+95
<b>.</b> 90000000+0C	.50000n-01	•2000000+02	.2534911 <b>÷</b> 05
• 9000000±00	<b>.</b> 8000000-01	•1250000+02 .	•242C869 <del>*</del> 95
•9^0000000%00	<b>.1000000</b> +00	•1000000÷92	.2353885+05
• 9000000 <del>1</del> +00	•2000000÷00	•5000000+01	.2090615+05
• 40000000+00	.40000C0+00	.2500000+01	<b>.</b> 1753848+05
•9000000+00	•600000¢00	.1666667+01	•1534934÷05
•9000000400	.8CGNQQQ+NQ	.125000C÷01	.1375771+05
*3vú0GúC*OO	.1000000+01	.10000000+01	•1252580÷C5
•9000000+00	•2000C00+01	•5000000÷∩0	.8885887+04
•9000000¢00	<b>.</b> 3¢00000÷01	.3333333+00	.7000867+94
• ᲛᲘᲔᲔᲔᲘ 🕻 + ជ 🕻	•4000000÷01	<b></b> 2500000400	.58122r0+04
• auōuuuu +ū a	•500000 <del>0+</del> 01	•2000000 <del>+</del> 00	<b>.</b> 4983748∻04
•9000000400	.8C00C00∻01	•1250000+nn	<b>.</b> 3513869÷04
• 90000000+00	•1000000÷02	<b>.</b> 10000000000	•2943450¢04
.9250000+00	•000000	•0000000	<b>.</b> 3111166+05
•925CCCC+7C	.1000000-01	.1000000493	.3033446₹05
•9250000+00	•25000C0-01	<b>.</b> 4000000∻02	.293C159+05
•925000C+0C	.5C00000-01	<b>.</b> 2000000402	.2784355+05
•925000C+0C	10-000008.	.1250700+02	2640002+05
•925000C+0C	.1000000+00	.1000000±02	.2557181+05
•9250000+00	.2000010+10	•5000000÷01	.2242724+05
•9250000;+00	•40000c0÷00	.2500000+01	.1859167+05

THO STAGES - BCTH REUSABLE---REFUELED SLINGSHOT\*\*\*\*PAYLCAÓ RETRIEVAL

ISP= 460.0

LAMBCA	WPL/hS	WS/WPL	DELTAV
•925000040C	.6cc00000÷00	.1666667÷01	•1617633+05
•9250000+00	•8000000÷00	.1250000+01	•1444871÷C5
^•9250000+0C	•10000000÷01	<b>.</b> 1000000÷01	• <b>1</b> 312490+05
.925C00C+0C	•20000000+01	•5000000+00	•9265455+04
•925000C*0C	<pre>-3C00000+01</pre>	.2333333÷00	•7289C25÷04
•9250000+0C	.4000000÷01	•2500010÷00	•6047582+04
.9250000+0C	•5000000÷01	•200000C÷00	•5184789+04
•9250000±00	.8CCOOCO+01	1250000+00	•3655632+04
•9250000+00	•1000000+92	.1000000+00	·3062656+04
•9500C0C+0C	• 0000000	• ԾԱԾԱՍԱՄ	•3575322+C5
<b>.</b> 9500000+00	.1GN0000-01	•1000000+03	•3454082+C5
.9500000+0C	.2500000-01	•4000000+02	•3301058+C5
•9500000+0C	.5CC00CO-01	.2009990+92	•3097185+C5
•9500000÷00	.8000000-01	.1250000¢02	·2905636+C5
•950 <b>0</b> 000+00	.10000000c00	.1000100402	•2799511+05
•950QCQC+AC	.20000CO+00	.5000000÷01	•2415034+05
•9500000¢00	•4000000 <del>*</del> 00	.2500000+01	<b>1973651+75</b>
•95000000400	.6000000÷00	.1666667401	•1706011+05
•95000000+nc	.8000000÷00	•1250000÷01	•151E077+95
<b>.</b> 9500000400	.10000000+01	.1000000401	•1375650÷35
•9500000÷00	.2000000÷01	. <b>-50000000</b> +00	•9662976+04
•950000C+00	.3000000+01	•3333333+00	•7591002+04
.950000¢00	<b>.</b> 4000000+01	.2500000+00	•6295495+74
•9500000÷00	.50000000÷01	.2000000400	•5396211+04
•95000000+00	.8000000+01	•1250000+00	.3805379+04
•95n0n0n+n0 ·	.1000000+02	.1000000+00	<b>.</b> 3188854+04

TWO STAGES - BOTH REUSABLE---REFUELED SLINGSHCT\*\*\*\*ROUNDTRIP

LAMBCA	WPL/WS	WS/WPL	DELTAV
.8300000400	•0000000	• 0000000	.1961786+05
<b>.</b> 8小ウ Ი ṇ Ი Ე + Ი C	.1000000-01	.1007010+03	.1926611+05
<b>.</b> 80000000+00	-25000C0-01	.4000000+02	•1877C86+C5
<b>.</b> 8იიენი0*მნ	.5000000-0l	.2000000+92	.1801991+05
<b>.</b> 8000000400	•8000000-01	•125000C+02	•1722929+05
.80000000+00	•1¢00000+00	.1001110+02	:1673809+05
•8000CCC+0C	•2000000+00	.50COOO0+01	.1477159+05
<b>.</b> 8000000400	.4C000C0+00	•2500000+01	•1215130 <del>+</del> 05
<b>.</b> 80000000+00	•600000+00	<b>.</b> 1666667+01	•1042666+C5
<b>~8000000+00</b>	.8CCOCCO+CO	.125)000+01	•9178857÷04
.80000000+00	•1000000+01	•1000000+01	•8223010+04
.80000000+00	.2000000+01	•500 <u>000</u> 400	•5491108+94
*8ՆՕՊԸ <b>ս</b> մ+սԸ	.3CC0000+01	.3333333÷CO	<b>.</b> 4156891+04
<b>.</b> 8ეიეციც+იც	.4C00000+01	•250 <u>^</u> 00+00	.3353527+04
<b>3</b> 0+0000108•	.50000000+01	.2000000+00	.28137¢8÷04
<b>.</b> 8000000÷00	<b>.</b> 8000000+01	•1259 <u>0</u> 10+90	•1901584+04
<b>.</b> 8ეⴈეႤᲘᲔ∻Ი᠐	.100000+02	.1007000400	.15647€5+94
•8250000+00	•0000000	•0000000	·2120676+C5
• 8 25 0 CO C+O C	.1000000-01	•1000000±03	.2079353+05
<b>.</b> 8250000+00	.25000C0-C1	• <b>4</b> 0000000÷02	.2021586∻C5
•8 250 <u>,</u> 000+0¢	.5000000-01	•2000000÷02	•1934837≠05
<b>.</b> 8250000+00	.8000010-01	•1250000+02	.1843467+05
\$25000C+0C	.1000000+00	•1000000+02	.1788816+05
.8250QCQ+AQ	<b>.</b> 2000001400	·•5001100+01	.1568919+05
•8250C^C+AC	^ <b>.</b> 4900000+00	•2500000+01	.1281811+05
•8250000¢0C	.6000000+00	.1666667∻01	•1095633+05
•8251909÷0C	<b>.</b> 8000000+00	.1250700+01	•962°369+04
.8250C0C+10	.1000000+01	.10000000+01	<b>.</b> 8602453 <b>+</b> 04
.8259000¢00	•2000010 <del>+</del> 11	<b>`.</b> 5000000+00	.5715814+04
.8250Cnc+nn	•300000+01	.3333333÷00	•4316935+04
• 8250CAC+AC	.4000000+01	.250000C÷00	.3477836+04

TWO STAGES - BOTH REUSABLE---REFUELED SLINGSHOT\*\*\*\*ROUNDTRIP

LAPECA	WPL7WS	WS/WPL	CELTAV
.8250000*00	•5000000÷01	.2000000+00	. 2915324+04
.8250000+0C	.8CC00CC+01	·1250000+00	·1967226+C4
.8-25000C+0C	.1000000+02	.1000000+00	.1617859+04
.8500000400	.0000000	•0000000	.2303143+05
.85000000+00	.1000000-01	.1000000+03	.2253683+05
8500000400	.250 <u>0</u> 000-01	•4000000÷02	-2185181+05
.85000000+00	•500000 <del>-</del> 01	•2000000+02	. •2083581+05
•8500000 <del>+</del> 00	.8600000-01	•1250000÷02	•1978023÷05
<b>.</b> 85000000∻00	•1000000÷00	•1000000¢02	•1915517+05
.85000000+00	•2000CO+00	.5000000+01	•1668015+05
•8 <i>5</i> 000000∻00	•4 <b>ɾ</b> 00000÷00	.2500COC+C1	.1352373+05
.85000000+00	•600000+00	.1666667401	•1151C80±05
<b>.</b> 8507000+00	*8C3O3C0∻0O	•1250 <u>000+01</u>	.1007935+05
<b>.</b> 85000000+00	.1000000+01	•1000000+01	•8994969 <b></b> €C4
<b>.</b> 8500000+00	.2000000+01	•5000000÷00	•5945321+04
<b>.</b> 85^0000+00	<b>.</b> 3000000+01	.3333333+00	•4479476+04
<b>.</b> 85000000+00	-4CC0000÷01	•25N140C+G0	•3603679÷04
<b>.</b> 8500000+00	.5C00C00+01	• 2000000+c0	•3017974÷04
•85000000+0C	.8000000+01	1250000+00	•2033302+04
•8500000 <del>1</del> 00	.1C000CC+02	•1000000÷00	·1671246+04
•87590n0+nc	.000000	• 0000000	·2517628÷05
.8750000+00	1000000-01	•10000000÷03	•2456889 <del>+</del> 05
•875000C+0C	-2500000-01	<ul><li>40000000+02</li></ul>	•2373815+05
<b>.</b> 87,50000+00	•5000000 <del>-</del> 01	<b>.200</b> 0000+02	•2252636 <b>+</b> C5
.8750000÷0C	-800000-01	·1250000+02	•2128942+05
•8750000÷00	.1000000+00 .	•1000000÷02	•2056618+C5
.875CC00+00	•50000U0÷00	.5000000+01	•1775757÷05
<u>.</u> 8750000+00	•4CCOOCO+OO	•2500000 <del>+</del> 01	•1427314÷∩5
.8750000+0C	•6000000÷00	.1666667+01	•1209262+05
•8750000÷00	.8000000÷00	•1250000÷01	•1055732÷05
•875000040,0	.1000000÷01	.1000000+01	•9401553±04

TWO STAGES - BOTH REUSABLE---REFUELED SLINGSHCT\*\*\*ROUNDTRIP

ISP= 460.0

. LAMBEA	WPL/WS	WS/WPL	DELTAV
•87500CC+0C	.2000000÷01	.5000000+00	•6179856+04
<u>. •8750000+00</u>	.30000n0+n1	.3333333+00	•4644599+04
.8750CCC+0C	.4000000+01	•2500000+c0	.3731086+04
•875 <u>0000+00</u>	•5(CACAA+A1	.2001000+00	•3121687±C4
•8750C^C+OC	.86000000≁01	1259900+00	<b>.</b> 2099822+04
•8750000+0C	.1000000÷02	.1007700÷70	•1724924+04
•30000000+00	<b>-</b> 0000000	• 000000	.2778207+05
.9000000100	.1000000-01	•10 <u>0</u> 000+03	•2700754+05
.9000000+00	•2500000 <del>-</del> 01	- 4000000+02	•2596795+05
•9000000+00	•50000nn-01	2000000+02	•2448602 <b>+</b> 05,
•9/100010+00	.800000-01	•1250000÷02	.230C881+C5:
• 9000000 r + 0 C	.1000000+00	•1000000+02	•2215917+05
• ᲒᲡᲡᲔᲡᲘᲡ+ᲔᲡ	.2000000+00	•5000070 <del>+</del> 71	•1893857±05
.900000C+0C	<b>"</b> 4¢¢0000+00	•25C7000÷01	•1507241÷05
•91111100410	.600000+00	<ul><li>1666667÷01</li></ul>	.1270478+05
<b>₊</b> 9ՈՂՈՈՌՈ∻ՈՐ	.8CCAAQA+AA	•1250 <u>000</u> +01	•11056C4+C5
*80000000+00	.10000000+01	•1000000÷01	•9823329+04
• 9000000 +00	<b>.</b> 2€000€0÷01	<b>.</b> 5000∩00∻00	•6419668 <del>+</del> 94
•9000000+00	.3000000401	•3333333+00	•48124 <u>0</u> 0+04
*&CJJCJJ+UJ	.4000000 <del>4</del> 01	<u>.</u> 2500000+00	•3860113÷04
*30000000+00	.5C00CC0+01 '	2000000+00	•3226464¢04
* გსემისნ+ს მ	<b>.</b> 8¢₫ეႳ¢ე&ე1	•1257000+00	•2166796±04
* 860 0 6 0 0 4 0 0	•10000c0±02	•1000 <u>00</u> 0+00	<b>.</b> 1778895+04
• 9250¢^ ¢.+^ ¢	•000000	<b>~</b> 0000000	.3111165÷05
•9250000,+00	.1000000-01	• <b>•</b> 1009990+03	<b>.</b> 3006445÷05
•925000C+0C	-2500000-01	.4000000÷02	•2869963+05
•9250000 <sup>1</sup> +00	.50C0000-01	•2000000÷02	•2682032+05
•9250n00 +0C	.8000000-01	.1257000+92	•2500902÷05
•925000C+0C	•10000CO+00	•1000000÷02	.2399C21+C5
•9250nnr+nc	<b>。</b> 2000000+00	.50000000+01	•2024620 <del>+</del> 05
•9250000+00	.4C000C0+00	.2500000+01	•1592903+05

TWD STAGES - BOTH REUSABLE---REFUELED SLINGSHOT\*\*\*ROUNDTRIP .

LAPBCA	WPL/hS	WS/WPL	DELTAV
.925000G+0C	.6CC00C0+00	.1666667÷01	.1335085+05
•9250000+00	.8¢30¢¢0+00	•125000C+01	•1157751+05
•9250000400	.1000000+01	.1000000001	.1026157+05
.9250300+00	*2000000+01	.5000000+00	.6665027+04
•9250000+0C	+3000000+C1	.333333400	<b>.</b> 4982577÷04
.9250001÷00	•40000000	.2500000+00	•3990802÷C4
•9250000+00	.5000000401	•20 <u>0</u> 00000400	.3232353÷04
•9250000+00	.80000co+01	•1250G0C÷00	·2234227+04
•9250000+0C	•1000000÷02	•1000100÷00	.1833167+04
.9500000±0°	<b>₊</b> 0001000	•000000	.35753224C5
.9590CCC+0C	•1000000-01	•1000000±03	.3418981405
- *&200000400	.2500000-01	•4000000÷02	•3223894÷¢5
.9500000 <del>+</del> 00	•5000000-01	• 200 <u>0</u> 00000+02	。29 <b>71</b> 528∻05
•950000C+00	.8000000-01	•1250naa÷n2	• 274C559+C5
•950 <u>00</u> 00+00	.1000000000	.1000000+02	.2614759÷05
.9500000±0°	<b>.</b> 20000000÷00	•5 <u>0</u> 000000+01	.2171275+05
•9500000÷00	•4000000+00	.2509900401	.1685244+05
• 5 50 0 60 0 40 0	<b>.</b> 6€070£0∻00	.1666667÷01	.1403507+05
.95000000+00	•8000000÷00	.125000C÷01	.1212408÷05
.9500000+00	1ccocco+01	,1000000÷11	.1071773405
, 9540000400	.2CC00000÷01	•500 <u>/</u> 0/0/00	.6916223+94
•9500000+0C	.3000000÷01	.3333333+00	•5156433+04
•9500CPO+0C	.4000000÷01	•250000¢+00	.4123201÷04
.9500000+00	•50000C0÷01	•2000000+00	•3439373÷04
•9500000+00	•8000000÷01	*1250000÷00	.2302124÷04
•9500900+00	.1000000+02	•1000000+00	.1887738+04